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NEWS 3 OCT 23 The Derwent World Patents Index suite of databases on STN
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NEWS 10 DEC 11 CAS REGISTRY chemical nomenclature enhanced
NEWS 11 DEC 14 WPIDS/WPINDEX/WPIX manual codes updated
NEWS 12 DEC 14 GBFULL and FRFULL enhanced with IPC 8 features and
functionality
NEWS 13 DEC 18 CA/CAPLUS pre-1967 chemical substance index entries enhanced
with preparation role
NEWS 14 DEC 18 CA/CAPLUS patent kind codes updated
NEWS 15 DEC 18 MARPAT to CA/CAPLUS accession number crossover limit increased
to 50,000
NEWS 16 DEC 18 MEDLINE updated in preparation for 2007 reload
NEWS 17 DEC 27 CA/CAPLUS enhanced with more pre-1907 records
NEWS 18 JAN 08 CHEMLIST enhanced with New Zealand Inventory of Chemicals
NEWS 19 JAN 16 CA/CAPLUS Company Name Thesaurus enhanced and reloaded
NEWS 20 JAN 16 IPC version 2007.01 thesaurus available on STN
NEWS 21 JAN 16 WPIDS/WPINDEX/WPIX enhanced with IPC 8 reclassification data
NEWS 22 JAN 22 CA/CAPLUS updated with revised CAS roles
NEWS 23 JAN 22 CA/CAPLUS enhanced with patent applications from India
NEWS 24 JAN 29 PHAR reloaded with new search and display fields
NEWS 25 JAN 29 CAS Registry Number crossover limit increased to 300,000 in
multiple databases
NEWS 26 FEB 13 CASREACT coverage to be extended
NEWS 27 Feb 15 PATDPASPC enhanced with Drug Approval numbers
NEWS 28 Feb 15 RUSSIAPAT enhanced with pre-1994 records
NEWS 29 Feb 23 KOREAPAT enhanced with IPC 8 features and functionality
NEWS 30 Feb 26 MEDLINE reloaded with enhancements
NEWS 31 Feb 26 EMBASE enhanced with Clinical Trial Number field
NEWS 32 Feb 26 TOXCENTER enhanced with reloaded MEDLINE
NEWS 33 Feb 26 IFICDB/IFIPAT/IFIUDB reloaded with enhancements
NEWS 34 Feb 26 CAS Registry Number crossover limit increased from 10,000
to 300,000 in multiple databases

NEWS EXPRESS NOVEMBER 10 CURRENT WINDOWS VERSION IS V8.01c, CURRENT
MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
AND CURRENT DISCOVER FILE IS DATED 25 SEPTEMBER 2006.

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=> spot or (peptide (w) synthesis) or (epitope (w) synthesis)
L1 237505 SPOT OR (PEPTIDE (W) SYNTHESIS) OR (EPITOPE (W) SYNTHESIS)

=> microwave or ehf
L2 156527 MICROWAVE OR EHF

=> 11 (w) 12
L3 11 L1 (W) L2

=> dup rem 13
PROCESSING COMPLETED FOR L3
L4 11 DUP REM L3 (0 DUPLICATES REMOVED)

=> d ibib abs total

L4 ANSWER 1 OF 11 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2006:16369 CAPLUS

DOCUMENT NUMBER: 144:254374

TITLE: Microwave-assisted coupling with DIC/HOBt for the
 synthesis of difficult peptoids and fluorescently
 labeled peptides-a gentle heat goes a long way

AUTHOR(S): Fara, Mario A.; Diaz-Mochon, Juan Jose; Bradley, Mark

CORPORATE SOURCE: School of Chemistry, University of Edinburgh,
 Edinburgh, EH9 3JJ, UK

SOURCE: Tetrahedron Letters (2006), 47(6), 1011-1014
 CODEN: TELEAY; ISSN: 0040-4039

PUBLISHER: Elsevier B.V.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Mild thermal effects (Arrhenius based) achieved with microwave heating
 proved to be highly successful in enabling rapid and efficient secondary

amine couplings and the labeling of peptides with a variety of fluorophores and quenchers in high yields and purities with just traditional, yet robust, HOBT/DIC chemical

REFERENCE COUNT: 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 2 OF 11 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2007:66246 CAPLUS

TITLE: Microwave heating for solid-phase peptide synthesis: general evaluation and application to 15-mer phosphopeptides

AUTHOR(S): Brandt, Malene; Gammeltoft, Steen; Jensen, Knud J.

CORPORATE SOURCE: Department of Natural Sciences, Section for Bioorganic Chemistry, Royal Veterinary and Agricultural University, Frederiksberg, DK-1871, Den.

SOURCE: International Journal of Peptide Research and Therapeutics (2006), 12(4), 349-357
CODEN: IJPRFC; ISSN: 1573-3149

PUBLISHER: Springer

DOCUMENT TYPE: Journal

LANGUAGE: English

AB A comprehensive study of microwave heating in manual solid-phase peptide synthesis is presented. Three different solid supports and three different linkers were evaluated for the synthesis of one short and two medium length peptides, including a phosphopeptide. Microwave heating to 60°C was applied to different kinds of amide bond formation, reductive amination, removal of the Fmoc protecting group, and to the acidolytic release of peptides from different handles. Using microwave heating, reaction times were significantly reduced, while maintaining the high purity of the crude products. However, control expts. showed that reaction times as short as 3-4 min at rt, at least for some applications, were sufficient for acylations (couplings). While microwave heating could be used in all steps in solid-phase peptide synthesis, particularly relatively slow steps benefited from this method.

REFERENCE COUNT: 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 3 OF 11 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2003:190685 CAPLUS

DOCUMENT NUMBER: 139:53283

TITLE: A new, rapid, general procedure for the synthesis of organic molecules supported on methoxy-polyethylene glycol (MeOPEG) under microwave irradiation conditions

AUTHOR(S): Porcheddu, Andrea; Ruda, Gian Filippo; Sega, Alessandro; Taddei, Maurizio

CORPORATE SOURCE: Dipartimento di Chimica, Universita degli Studi di Sassari, Sassari, 07100, Italy

SOURCE: European Journal of Organic Chemistry (2003), (5), 907-912

CODEN: EJOCFK; ISSN: 1434-193X

PUBLISHER: Wiley-VCH Verlag GmbH & Co. KGaA

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 139:53283

AB The procedure for the precipitation of mols. supported on MeOPEG (mol. mass 5000)

and their purification by fractional crystallization has been made easier by use of

microwave irradiation A correct choice of the solvent employed for reaction or purification (DME, THF, 1,2-dichlorobenzene, iPrOH, ethylene glycol) allows working with 10 g of MeOPEG-OH, dissolved in 100 mL of solvent, under microwave irradiation conditions and for crystallization to be induced just by removal

of the reaction flask from the microwave oven. No addnl. precipitation solvents

are needed, thus reducing the reaction times and the potential hazards of working with large amts. of flammable solvents. The syntheses of several peptides and of a tetrasubstituted pyridine are reported. Large amts. of MeOPEG-OH may be used in this procedure, and so polyethylene glycol assisted organic synthesis can be regarded as a valid preparative technique.

REFERENCE COUNT: 46 THERE ARE 46 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 4 OF 11 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2002:674277 CAPLUS
DOCUMENT NUMBER: 138:14167
TITLE: Rapid microwave-assisted solid phase peptide synthesis
AUTHOR(S): Erdelyi, Mate; Gogoll, Adolf
CORPORATE SOURCE: Department of Organic Chemistry, Department of Medicinal Chemistry, Uppsala University, Uppsala, 751 21, Swed.
SOURCE: Synthesis (2002), (11), 1592-1596
CODEN: SYNTBF; ISSN: 0039-7881
PUBLISHER: Georg Thieme Verlag
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 138:14167

AB A microwave-assisted, rapid solid phase peptide synthesis procedure is presented. It has been applied to the coupling of sterically hindered Fmoc-protected amino acids yielding di- and tripeptides. Optimized conditions for a variety of coupling reagents are reported. Peptides were obtained rapidly (1.5-20 min) and without racemization.

REFERENCE COUNT: 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 5 OF 11 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on STN

ACCESSION NUMBER: 2003:175986 BIOSIS
DOCUMENT NUMBER: PREV200300175986
TITLE: Changes in synapsin I localization during synaptogenesis.
AUTHOR(S): Buchanan, J. [Reprint Author]; Micheva, K. [Reprint Author]; Smith, S. J. [Reprint Author]
CORPORATE SOURCE: Molecular and Cellular Physiology, Stanford University School of Medicine, Stanford, CA, USA
SOURCE: Molecular Biology of the Cell, (Nov 2002) Vol. 13, No. Supplement, pp. 396a. print.
Meeting Info.: 42nd Annual Meeting of the American Society for Cell Biology. San Francisco, CA, USA. December 14-18, 2002. American Society for Cell Biology.
ISSN: 1059-1524 (ISSN print).
DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LANGUAGE: English
ENTRY DATE: Entered STN: 9 Apr 2003
Last Updated on STN: 9 Apr 2003

L4 ANSWER 6 OF 11 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1997:508040 CAPLUS
DOCUMENT NUMBER: 127:190992
TITLE: Studies of microwave effects on chemical reactions
AUTHOR(S): Chen, Shui-Tein; Tseng, Ping-Hui; Yu, Hui-Ming; Wu, Chi-Yue; Hsiao, Kwo-Feng; Wu, Shih-Hsiung; Wang, Kung-Tsung
CORPORATE SOURCE: Institute of Biological Chemistry, Academia Sinica, Taipei, 11529, Taiwan
SOURCE: Journal of the Chinese Chemical Society (Taipei) (1997), 44(3), 169-182
CODEN: JCCTAC; ISSN: 0009-4536
PUBLISHER: Chinese Chemical Society
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English

AB A review with 52 refs. on applications of microwave irradiation. The authors have used this unique technol. to develop: (1) a method to control the cleavage sites of peptide bonds, especially those bonds connected to aspartic acid residues in native peptides and proteins, (2) a method to increase coupling efficiency in solid-phase peptide synthesis using a common microwave oven, (3) a novel procedure that increases the rate of alcalase-catalyzed reactions using microwave irradiation in peptide-bond formation with proline as a nucleophile and selective benzylation of a pyranoside derivative, (4) a procedure to solubilize and hydrolyze retrograded starch, and (5) a novel procedure to enhance the rate of saponification in a serum

sample for very long chain fatty acid anal.

REFERENCE COUNT: 45 THERE ARE 45 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 7 OF 11 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1992:572007 CAPLUS

DOCUMENT NUMBER: 117:172007

TITLE: Enhanced coupling efficiency in solid-phase peptide synthesis by microwave irradiation

AUTHOR(S): Yu, Hui Ming; Chen, Shui Tein; Wang, Kung Tsung

CORPORATE SOURCE: Inst. Biol. Chem., Acad. Sin., Taipei, 10098, Taiwan

SOURCE: Journal of Organic Chemistry (1992), 57(18), 4781-4

CODEN: JOCEAH; ISSN: 0022-3263

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Procedures have been developed for increasing coupling efficiency in solid-phase peptide synthesis by microwave irradiation using a kitchen microwave oven. A rate increase of at least 2-4 fold was observed. For side-chain hindered amino acids or for peptides containing difficult-coupling sequences, the peptide bond formation can be finished within 4-6 min. Under the same irradiation conditions, the microwave induced rate enhancement is more significant using Fmoc-peptide fragments than using amino acid derivs. in peptide synthesis. No detectable racemization reaction was observed.

L4 ANSWER 8 OF 11 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1989:222024 CAPLUS

DOCUMENT NUMBER: 110:222024

TITLE: Comparison of the microwave and soft x-ray emission above a sunspot

AUTHOR(S): Siarkowski, M.; Sylwester, J.; Jakimiec, J.; Bentley, R. D.

CORPORATE SOURCE: Sp. Res. Cent., Pol. Acad. Sci., Wroclaw, Pol.

SOURCE: Solar Physics (1989), 119(1), 65-75

CODEN: SLPHAX; ISSN: 0038-0938

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The Westerbork Synthesis Radio Telescope 6 cm radio observations of the active region HL 16864 large spot were compared with x-ray data obtained from the Flat Crystal Spectrometer (FCS) onboard the Solar Maximum Mission satellite on May 25, 1980. The x-ray data confirm the presence of a temperature

depression above the spot umbra in agreement with suggestions obtained from radio data anal. Differences in the spatial distribution of both kinds of emission observed in the corona above this spot are attributed mainly to the strong resonant character of the cyclotron radio radiation. Some differences are also caused by both the relatively low efficiency and the low spatial resolution of the FCS. Deconvolution of x-ray images allows seeing the new structures and enhances the mutual correlation between x-ray and radio pictures.

L4 ANSWER 9 OF 11 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on STN

ACCESSION NUMBER: 1989:110037 BIOSIS

DOCUMENT NUMBER: PREV198936055453; BR36:55453

TITLE: DETERMINATION OF AMINO ACIDS ON MERRIFIELD RESIN BY
MICROWAVE HYDROLYSIS.
AUTHOR(S): YU H-M [Reprint author]; CHEN S-T; CHIOU S-H; WANG K-T
CORPORATE SOURCE: INST BIOCHEM SCI, NATL TAIWAN UNIV, ACADEMIA SINICA, PO BOX
23-206, TAIPEI
SOURCE: Journal of Chromatography, (1988) Vol. 456, No. 2, pp.
357-362.
DOCUMENT TYPE: Article
FILE SEGMENT: BR
LANGUAGE: ENGLISH
ENTRY DATE: Entered STN: 21 Feb 1989
Last Updated on STN: 21 Feb 1989

L4 ANSWER 10 OF 11 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1984:129438 CAPLUS
DOCUMENT NUMBER: 100:129438
TITLE: Interpretation of microwave active region structures
using SMM soft x-ray observations
AUTHOR(S): Strong, K. T.; Alissandrakis, C. E.; Kundu, M. R.
CORPORATE SOURCE: Space Astron. Group, Lockheed Missiles and Space Co.,
Palo Alto, CA, 94304, USA
SOURCE: Astrophysical Journal (1984), 277(2, Pt. 1), 865-73
CODEN: ASJOAB; ISSN: 0004-637X
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Microwave ring structures associated with active region sunspots were
discovered by C. E. Alissandrakis and M. R. Kundu (1982); however, there
has been some uncertainty as to their origin. Combined soft x-ray and
microwave data are given for 2 active regions, one of which had microwave
ring structure. The regions were observed simultaneously by the x-ray
Polychromator on the Solar Maximum Mission (SMM) satellite and the
Westerbork Synthesis Radio Telescope at 6.16 cm while they were near to
disk center on 1980 May 25 and 26. The x-ray spectroheliograms were used
to derive the electron temperature and d. of the coronal material of the ring
structure. No significant variations were found across these regions, so
they are not a result of systematic variations in electron temperature and d.

in
the coronal material above sunspots. Model computations are presented
which show that the microwave emission at the center of the ring comes
from a cooler region. In the course of this anal., a cool, compact soft
x-ray feature was observed associated with 1 of the main spots. It also
corresponded to a microwave and H α feature. It persisted for at
least a day with a high d. (1011 cm⁻³) but a low temperature (1.5 + 106
K).

L4 ANSWER 11 OF 11 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1967:60413 CAPLUS
DOCUMENT NUMBER: 66:60413
TITLE: A radio source associated with a rapidly developing
group of sunspots
AUTHOR(S): Borovik, V. N.; Korzhavin, A. N.; Peterov, N. G.
SOURCE: Solnechnye Dannye (1965), (10), 67-71
From: Ref. Zh., Astron. 1966, Abstr. No. 7.51.314
CODEN: SODAA7; ISSN: 0552-5829
DOCUMENT TYPE: Journal
LANGUAGE: Russian

AB In March, 1965, the group of sunspots Number 25 (numbering from the Bulletin
"Solnechnye Dannye"), in a state of disintegration, suddenly and
unexpectedly increased by 6 times in area from March 18 to 19. On the
19th of March, the ratio emission flux from the source associated with this
group and observed with the large Pulkov radiotelescope simultaneously at
wavelengths of 3.2 and 4.5 cm. (resolution power 1',1 and 1',3, resp.)
increased by approx. the same magnitude. The size of the source, which
remained constant throughout the observation period, was 1',5 at 3.2 and 2'3
at 4.5 cm. On March 19, the brightness temperature of the source, calculated
under

the assumption of its circular symmetry, was 120,000°K. at 3.2 and 170,000°K. at 4.5 cm. The kinetic temperature, calculated from these data, was 200,000°K. The optical thickness of the emitting region, on March 19, was 0.9 at 3.2 and 1.8 at 4.5 cm. The emission measure was: $I_{N2eds} = 0.5 + 1029$. The kinetic temperature was 4 times greater, and the emission measure 8 times greater, on March 19, than on March 18. The effective emission center of the source before and after March 19, was over the photosphere at a distance of (0.04 ± 0.01) R.sun. at 3.2 and (0.05 ± 0.01) R.sun. at 4.5 cm. No strict correlation was found between the changes in the area in the optical group of spots and the radiation flux from the corresponding radio source; this was in accordance with previously obtained data for the same wavelengths.

=> combinatorial (3a) library and peptide
L5 6070 COMBINATORIAL (3A) LIBRARY AND PEPTIDE

=> 15 and microwave
L6 19 L5 AND MICROWAVE

=> dup rem 16
PROCESSING COMPLETED FOR L6
L7 16 DUP REM L6 (3 DUPLICATES REMOVED)

=> d ibib abs total

L7 ANSWER 1 OF 16 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2006:248852 CAPLUS
TITLE: Efficient synthesis of β - peptide
combinatorial libraries with
microwave irradiation
AUTHOR(S): Murray, Justin K.; Sadowsky, Jack D.; Gellman, Samuel
H.
CORPORATE SOURCE: Department of Chemistry, University of Wisconsin,
Madison, WI, 53706, USA
SOURCE: Abstracts of Papers, 231st ACS National Meeting,
Atlanta, GA, United States, March 26-30, 2006 (2006),
ORGN-137. American Chemical Society: Washington, D.
C.
CODEN: 69HYEC
DOCUMENT TYPE: Conference; Meeting Abstract; (computer optical disk)
LANGUAGE: English

AB The predictable relationship between β -amino acid sequence and folding has inspired several biol. applications of β - peptides, including the inhibition of protein-protein interactions. For many such applications it would be desirable to prepare and screen β - peptide libraries. However, standard solid-phase peptide synthesis protocols are not efficient enough to support a library approach, especially for sequences designed to adopt the 14-helix. We have evaluated the effects of microwave irradiation on the solid-phase synthesis of β - peptides, accomplishing a 10-fold reduction in reaction time and improving the initial purity of β - peptide products. Using our optimized microwave reaction conditions, we have synthesized β - peptide libraries in parallel with 96-well filter plates. Our microwave-assisted methodol. was adapted to synthesis on polystyrene macrobeads, and we have rapidly prepared high-quality β - peptide combinatorial libraries via split-and-mix techniques. These synthetic methods were applied to the optimization of foldamer inhibitors of the Bcl-xL/BH-3 domain protein-protein interaction.

L7 ANSWER 2 OF 16 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2005:1257634 CAPLUS
DOCUMENT NUMBER: 144:171229
TITLE: Microwave-Assisted Parallel Synthesis of a

14-Helical β - Peptide Library
AUTHOR(S): Murray, Justin K.; Gellman, Samuel H.
CORPORATE SOURCE: Department of Chemistry, University of Wisconsin,
Madison, WI, 53706, USA
SOURCE: Journal of Combinatorial Chemistry (2006), 8(1), 58-65
CODEN: JCCHFF; ISSN: 1520-4766
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 144:171229

AB To facilitate the preparation of β - peptide libraries in parallel, the authors have adapted reaction conditions for the solid-phase synthesis of 14-helical β - peptides for use in a multimode microwave reactor. The low temperature/pressure requirements of microwave-assisted β - peptide synthesis were found to be compatible with multiwell filter plates composed of polypropylene. Microwave heating of the 96-well plate was sufficiently homogeneous to allow the rapid preparation of a β - peptide library in acceptable purity.

REFERENCE COUNT: 54 THERE ARE 54 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 3 OF 16 CAPLUS COPYRIGHT 2007 ACS on STN DUPLICATE 1

ACCESSION NUMBER: 2005:945244 CAPLUS
DOCUMENT NUMBER: 143:422610
TITLE: Efficient Synthesis of a β - Peptide
Combinatorial Library with
Microwave Irradiation
AUTHOR(S): Murray, Justin K.; Farooqi, Bilal; Sadowsky, Jack D.;
Scalf, Mark; Freund, Wesley A.; Smith, Lloyd M.; Chen,
Jiandong; Gellman, Samuel H.
CORPORATE SOURCE: Department of Chemistry, University of Wisconsin,
Madison, WI, 53706, USA
SOURCE: Journal of the American Chemical Society (2005),
127(38), 13271-13280
CODEN: JACSAT; ISSN: 0002-7863
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The predictable relationship between β -amino acid sequence and folding has inspired several biol. applications of β - peptides. For many such applications, it would be desirable to prepare and screen β - peptide libraries. However, standard peptide synthesis protocols are not efficient enough to support a library approach for many types of β - peptides. The authors recently optimized the solid-phase synthesis of β - peptides using microwave irradiation, and they have now adapted this approach to synthesis on polystyrene macrobeads. Thus, a high-quality β - peptide combinatorial library via a split-and-mix strategy was rapidly prepared. This library was screened in search of β - peptide antagonists of the p53-MDM2 protein-protein interaction.

REFERENCE COUNT: 73 THERE ARE 73 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 4 OF 16 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on STN

ACCESSION NUMBER: 2006:29971 BIOSIS
DOCUMENT NUMBER: PREV200600030539
TITLE: Efficient synthesis of beta-peptide
combinatorial libraries with
microwave irradiation.
AUTHOR(S): Murray, Justin K. [Reprint Author]; Sadowsky, Jack D.;
Scalf, Mark; Smith, Lloyd M.; Chen, Jiandon; Gellman,
Samuel H.
CORPORATE SOURCE: Univ Wisconsin, Dept Chem, Madison, WI 53706 USA

SOURCE: Biopolymers, (2005) Vol. 80, No. 4, pp. 533.
Meeting Info.: 19th American Peptide Symposium. San Diego, CA, USA. June 18 -23, 2005. Amer Peptide Soc; AAPPTec; Amer Peptide Co; Amer Hlth/GE Healthcare; Amgen Inc; BACHEM; BIOMOL Int; C S Bio Co; Cambridge Res Biochem; Chemico Int Inc; Chem Today; Eli Lilly & Co; ESCOM Sci Fdn; Genentech; Hoffman-La Roche Inc; Merck Res Lab; Midwest Bio-Tech Inc; NeoMPS Inc; New England BioLabs Inc; Novo Nordisk A/S; Peptides Int Inc; PharmaChem; PolyPeptide Lab Inc; RSP Amino Acids LLC; Senn Chem USA; Sinopep Pharmaceut Inc; SynPep Corp; Synthetech Inc; UCB Bioproducts Inc.
CODEN: BIPMAA. ISSN: 0006-3525.

DOCUMENT TYPE: Conference; (Meeting)
Conference; (Meeting Poster)

LANGUAGE: English

ENTRY DATE: Entered STN: 28 Dec 2005
Last Updated on STN: 28 Dec 2005

L7 ANSWER 5 OF 16 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on STN
ACCESSION NUMBER: 2006:29862 BIOSIS
DOCUMENT NUMBER: PREV200600030430
TITLE: Efficient synthesis of beta-peptide
combinatorial libraries with
microwave irradiation.

AUTHOR(S): Murray, Justin K. [Reprint Author]; Sadowsky, Jack D.; Scalf, Mark; Smith, Lloyd M.; Chen, Jiandong; Gellman, Samuel H.

CORPORATE SOURCE: Univ Wisconsin, Dept Chem, Madison, WI 53706 USA
SOURCE: Biopolymers, (2005) Vol. 80, No. 4, pp. 511.
Meeting Info.: 19th American Peptide Symposium. San Diego, CA, USA. June 18 -23, 2005. Amer Peptide Soc; AAPPTec; Amer Peptide Co; Amer Hlth/GE Healthcare; Amgen Inc; BACHEM; BIOMOL Int; C S Bio Co; Cambridge Res Biochem; Chemico Int Inc; Chem Today; Eli Lilly & Co; ESCOM Sci Fdn; Genentech; Hoffman-La Roche Inc; Merck Res Lab; Midwest Bio-Tech Inc; NeoMPS Inc; New England BioLabs Inc; Novo Nordisk A/S; Peptides Int Inc; PharmaChem; PolyPeptide Lab Inc; RSP Amino Acids LLC; Senn Chem USA; Sinopep Pharmaceut Inc; SynPep Corp; Synthetech Inc; UCB Bioproducts Inc.
CODEN: BIPMAA. ISSN: 0006-3525.

DOCUMENT TYPE: Conference; (Meeting)
Conference; (Meeting Poster)

LANGUAGE: English

ENTRY DATE: Entered STN: 28 Dec 2005
Last Updated on STN: 28 Dec 2005

L7 ANSWER 6 OF 16 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2004:658697 CAPLUS
TITLE: AEI: Microwave-assisted
combinatorial chemistry: Highly efficient
library synthesis on planar supports

AUTHOR(S): Bowman, Matthew D.; Jeske, Ryan C.; Blackwell, Helen E.

CORPORATE SOURCE: Department of Chemistry, University of
Wisconsin-Madison, Madison, WI, 53706, USA
SOURCE: Abstracts of Papers, 228th ACS National Meeting,
Philadelphia, PA, United States, August 22-26, 2004
(2004), ORGN-432. American Chemical Society:
Washington, D. C.
CODEN: 69FTZ8

DOCUMENT TYPE: Conference; Meeting Abstract

LANGUAGE: English

AB We have developed a new platform for combinatorial synthesis that combines
microwave-assisted organic reactions with the SPOT-synthesis
technique. SPOT-synthesis is a conceptually simple, inexpensive, and

highly parallel approach for the synthesis of peptides and small mols. on planar supports. We have found that the incorporation of microwave-assisted reactions into SPOT-synthesis can expand significantly the scope of this technique. We have developed a new support/linker system for SPOT-synthesis, established its compatibility with a range of microwave-assisted organic reactions, and extended this methodol. to another cellulose support type for larger scale reactions. This methodol. allows for sizable libraries to be prepared in one day. Our ongoing work in the design and evaluation of chalcone-derived libraries will be presented.

L7 ANSWER 7 OF 16 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on STN
ACCESSION NUMBER: 2006:80534 BIOSIS
DOCUMENT NUMBER: PREV200600076475
TITLE: AEI: Microwave-assisted combinatorial chemistry: Highly efficient library synthesis on planar supports.
AUTHOR(S): Bowman, Matthew D. [Reprint Author]; Jeske, Ryan C.; Blackwell, Helen E.
CORPORATE SOURCE: Univ Wisconsin, Dept Chem, Madison, WI 53706 USA
blackwell@chem.wisc.edu
SOURCE: Abstracts of Papers American Chemical Society, (AUG 22 2004) Vol. 228, No. Part 2, pp. U90.
Meeting Info.: Meeting of the Division of Chemical Toxicology of the American-Chemical-Society held at the 228th National Meeting of the American-Chemical-Society. Philadelphia, PA, USA. August 22 -26, 2004. Amer Chem Soc, Div Chem Toxicol.
CODEN: ACSRAL. ISSN: 0065-7727.
DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LANGUAGE: English
ENTRY DATE: Entered STN: 25 Jan 2006
Last Updated on STN: 25 Jan 2006

L7 ANSWER 8 OF 16 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2004:654953 CAPLUS
TITLE: Microwave-assisted combinatorial chemistry: Highly efficient library synthesis on planar supports
AUTHOR(S): Bowman, Matthew D.; Jeske, Ryan C.; Blackwell, Helen E.
CORPORATE SOURCE: Department of Chemistry, University of Wisconsin-Madison, Madison, WI, 53706, USA
SOURCE: Abstracts of Papers, 228th ACS National Meeting, Philadelphia, PA, United States, August 22-26, 2004 (2004), AEI-071. American Chemical Society: Washington, D. C.
CODEN: 69FTZ8
DOCUMENT TYPE: Conference; Meeting Abstract
LANGUAGE: English

AB We have developed a new platform for combinatorial synthesis that combines microwave-assisted organic reactions with the SPOT-synthesis technique. SPOT-synthesis is a conceptually simple, inexpensive, and highly parallel approach for the synthesis of peptides and small mols. on planar supports. We have found that the incorporation of microwave-assisted reactions into SPOT-synthesis can expand significantly the scope of this technique. We have developed a new support/linker system for SPOT-synthesis, established its compatibility with a range of microwave-assisted organic reactions, and extended this methodol. to another cellulose support type for larger scale reactions. This methodol. allows for sizable libraries to be prepared in one day. Our ongoing work in the design and evaluation of chalcone-derived libraries will be presented.

L7 ANSWER 9 OF 16 EMBASE COPYRIGHT (c) 2007 Elsevier B.V. All rights reserved on STN

ACCESSION NUMBER: 2004277098 EMBASE
TITLE: Preface.
AUTHOR: Rankovic Z.
CORPORATE SOURCE: Dr. Z. Rankovic, Organon UK, Newhouse, Lanarkshire ML1 5SH, United Kingdom
SOURCE: Current Topics in Medicinal Chemistry, (2004) Vol. 4, No. 7, pp. xxx. .
ISSN: 1568-0266 CODEN: CTMCCL
COUNTRY: Netherlands
DOCUMENT TYPE: Journal; Editorial
FILE SEGMENT: 027 Biophysics, Bioengineering and Medical Instrumentation
037 Drug Literature Index
LANGUAGE: English
ENTRY DATE: Entered STN: 15 Jul 2004
Last Updated on STN: 15 Jul 2004

DATA NOT AVAILABLE FOR THIS ACCESSION NUMBER

L7 ANSWER 10 OF 16 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on STN

ACCESSION NUMBER: 2004:105857 BIOSIS
DOCUMENT NUMBER: PREV200400108746
TITLE: Isolation of protein ligands from large peptoid libraries.
AUTHOR(S): Alluri, Prasanna G.; Reddy, M. Muralidhar; Bachhawat-Sikder, Kiran; Olivos, Hernando J.; Kodadek, Thomas [Reprint Author]
CORPORATE SOURCE: Center for Biomedical Inventions, Departments of Internal Medicine and Molecular Biology, University of Texas Southwestern Medical Center, 5323 Harry Hines Boulevard, Dallas, TX, 75390-8573, USA
Thomas.Kodadek@utsouthwestern.edu
SOURCE: Journal of the American Chemical Society, (November 19 2003) Vol. 125, No. 46, pp. 13995-14004. print.
ISSN: 0002-7863 (ISSN print).
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 25 Feb 2004
Last Updated on STN: 25 Feb 2004

AB The isolation of ligands for large numbers of proteins is an important goal in proteomics. Whereas peptide libraries are rich sources of protein-binding molecules, native peptides have certain undesirable properties, such as sensitivity to proteases that make them less than ideal for some applications. We report here the construction and characterization of large, chemically diverse combinatorial libraries of peptoids (N-substituted oligoglycines). A protocol for the isolation of specific protein-binding molecules from these libraries is described. These data suggest that peptoid libraries will prove to be inexpensive and convenient sources of protein ligands.

L7 ANSWER 11 OF 16 MEDLINE on STN

ACCESSION NUMBER: 2003248058 MEDLINE
DOCUMENT NUMBER: PubMed ID: 12769696
TITLE: Microwave-assisted solid-phase synthesis (MASS): parallel and combinatorial chemical library synthesis.
AUTHOR: Al-Obeidi Fahad; Austin Richard E; Okonya John F; Bond Daniel R S
CORPORATE SOURCE: Aventis Combinatorial Technologies Center (formerly Selectide), 1580 E. Hanley Blvd, Tucson, AZ 85737, USA.. Fahad.Al-Obeidi@Aventis.com
SOURCE: Mini reviews in medicinal chemistry, (2003 Aug) Vol. 3, No. 5, pp. 449-60. Ref: 40
Journal code: 101094212. ISSN: 1389-5575.

PUB. COUNTRY: Netherlands
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200402
ENTRY DATE: Entered STN: 29 May 2003
Last Updated on STN: 18 Feb 2004
Entered Medline: 17 Feb 2004

AB The use of microwave technology in solid-phase organic synthesis has attracted much attention in recent years. The combination of solid support, either as a medium for chemical synthesis or as a carrier for organic reagents, with microwave heating offers several advantages over conventional techniques. Rapid and elevated heating of reaction mixtures can induce the completion of chemical transformations in minutes while several hours or days may be required for the same chemistry under conventional conditions. With decreased time of exposure to high temperatures and lessened thermal degradation, microwave accelerated chemistries often deliver products of higher purity when compared to conventional heating techniques. Several chemical syntheses on solid-phase employing microwave irradiation have been reported in the literature. The reagents, solvents, and equipment selected for microwave-mediated synthesis are important contributors to the success of the chemical transformation. Owing to the timesavings in performing chemical synthesis under microwave irradiation, the technique has become an emerging partner in solid-phase organic synthesis.

L7 ANSWER 12 OF 16 EMBASE COPYRIGHT (c) 2007 Elsevier B.V. All rights reserved on STN

ACCESSION NUMBER: 2004395442 EMBASE
TITLE: Combinatorial parallel synthesis of biologically active libraries on soluble polymer supports.
AUTHOR: Lee M.-J.; Sun C.-M.
CORPORATE SOURCE: C.-M. Sun, Lab. of Combinatorial Drug Discovery, Chemistry Department, National Dong Hwa University, Shou-Feng, Hualien 974, Taiwan, Province of China
SOURCE: Chinese Pharmaceutical Journal, (2003) Vol. 55, No. 6, pp. 405-452. .
Refs: 133
ISSN: 1016-1015 CODEN: CYHCEX
COUNTRY: Taiwan, Province of China
DOCUMENT TYPE: Journal; General Review
FILE SEGMENT: 029 Clinical Biochemistry
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 7 Oct 2004
Last Updated on STN: 7 Oct 2004

AB Combination with high throughput screening, combinatorial organic synthesis of diverse libraries of biologically active compounds has revolutionized the drug discovery process. Although combinatorial organic synthesis on solid supports is a useful approach, several groups are focusing their research efforts on liquid-phase combinatorial synthesis by using soluble polymer supports for generation of libraries. This macromolecular carrier (PEG), in contrast to an insoluble matrix, is soluble in different kinds of organic solvents and has a strong tendency to precipitate in some particular solvents. Liquid-phase combinatorial synthesis is a unique approach since homogeneous reaction conditions can be applied, while product purification similar to the solid-phase method can be carried out by simple filtration and washing. This strategy retains the advantages of classical solution-phase chemistry and solid-phase polymer-supported synthesis. Moreover, the smart designation of traceless linkers approach and the utilization of microwave technology on combinatorial chemistry improve the reaction's condition, time and results. This review, first, presents the history of soluble

polymer supports in the synthesis of combinatorial libraries; and then, some selected examples from our laboratory are introduced.

L7 ANSWER 13 OF 16 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2001:101412 CAPLUS
DOCUMENT NUMBER: 134:144207
TITLE: Methods for analyzing protein binding events
INVENTOR(S): Hefti, John
PATENT ASSIGNEE(S): Signature Bioscience, Inc., USA
SOURCE: PCT Int. Appl., 143 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 11
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001009606	A1	20010208	WO 2000-US20420	20000727
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 6287874	B1	20010911	US 1999-365580	19990802
CA 2378928	A1	20010208	CA 2000-2378928	20000727
EP. 1206700	A1	20020522	EP 2000-950759	20000727
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL				
JP 2003506683	T	20030218	JP 2001-514566	20000727
PRIORITY APPLN. INFO.:				
			US 1999-365580	A 19990802
			US 1998-73445P	P 19980202
			US 1999-243194	A2 19990201
			US 1999-134740P	P 19990518
			WO 2000-US20420	W 20000727

AB The present invention provides a variety of methods of analyzing protein binding events using a system capable of directly detecting protein/ligand complexes based upon the dielec. properties of the complex. The system can be used in a variety of analyses involving protein binding events, such as screening ligand libraries, characterizing protein binding interactions, and identifying ligands. The system can also be utilized in diverse anal. and diagnostic applications. Urease was attached to a gold transmission line on a glass chip. The urease-coated chip was reacted with mouse monoclonal anti-urease antibody. The difference spectrum clearly shows the ability to detect the binding of the antibody.

REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 14 OF 16 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2001:672205 CAPLUS
DOCUMENT NUMBER: 135:207866
TITLE: Methods for analyzing protein binding events with protein/ligand complexes
INVENTOR(S): Hefti, John
PATENT ASSIGNEE(S): Signature Bioscience, Inc., USA
SOURCE: U.S., 69 pp., Cont.-in-part of U.S. Ser. No. 243194.,
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 11

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6287874	B1	20010911	US 1999-365580	19990802
US 6368795	B1	20020409	US 1999-243194	19990201
CA 2378928	A1	20010208	CA 2000-2378928	20000727
WO 2001009606	A1	20010208	WO 2000-US20420	20000727
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
EP 1206700	A1	20020522	EP 2000-950759	20000727
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL				
JP 2003506683	T	20030218	JP 2001-514566	20000727
US 2002028461	A1	20020307	US 2001-923474	20010806
US 6566079	B2	20030520		
AU 2004203368	A1	20040819	AU 2004-203368	20040723
JP 2005308761	A	20051104	JP 2005-162003	20050601
PRIORITY APPLN. INFO.:				
			US 1998-73445P	P 19980202
			US 1999-243194	A2 19990201
			US 1999-134740P	P 19990518
			JP 2000-529595	A3 19990201
			US 1999-365580	A 19990802
			AU 2000-63816	A3 20000727
			WO 2000-US20420	W 20000727
AB The present invention provides a variety of methods of analyzing protein binding events using a system capable of directly detecting protein/ligand complexes based upon the dielec. properties of the complex. The system can be used in a variety of analyses involving protein binding events, such as screening ligand libraries, characterizing protein binding interactions, and identifying ligands. The system can also be utilized in diverse anal. and diagnostic applications.				
REFERENCE COUNT: 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT				
L7 ANSWER 15 OF 16 CAPLUS COPYRIGHT 2007 ACS on STN				
ACCESSION NUMBER: 2001:237629 CAPLUS				
DOCUMENT NUMBER: 134:367150				
TITLE: Techniques and strategies for producing compound libraries for biological screening				
AUTHOR(S): Wilson, Stephen R.; Reinhard, Kathryn				
CORPORATE SOURCE: New York University, New York, NY, USA				
SOURCE: High-Throughput Synthesis (2001), 55-64. Editor(s): Sucholeiki, Irving. Marcel Dekker, Inc.: New York, N. Y.				
CODEN: 69BBQR				
DOCUMENT TYPE: Conference; General Review				
LANGUAGE: English				
AB A review with 26 refs. Synthesis examples of compound libraries include a library of γ -turn mimics using robotics and solid-phase synthesis, a library of α -ketoamides using parallel solution phase synthesis, manual preparation by solid-phase synthesis of an encoded benzimidazole library, peptide library synthesis, and microwave-assisted solid-phase chemical				
REFERENCE COUNT: 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT				
L7 ANSWER 16 OF 16 CAPLUS COPYRIGHT 2007 ACS on STN				

ACCESSION NUMBER: 1999:405165 CAPLUS
 DOCUMENT NUMBER: 131:41811
 TITLE: Capillary electrophoretic methods to detect new biologically active compounds in complex biological material
 INVENTOR(S): Dunayevskiy, Yuriy M.; Waters, James L.; Hughes, Dallas E.
 PATENT ASSIGNEE(S): Cetek Corporation, USA
 SOURCE: PCT Int. Appl., 65 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9931496	A1	19990624	WO 1998-US26781	19981216
W: CA, JP				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
US 6299747	B1	20011009	US 1998-162586	19980929
CA 2315051	A1	19990624	CA 1998-2315051	19981216
CA 2315051	C	20041130		
EP 1040347	A1	20001004	EP 1998-965393	19981216
R: CH, DE, DK, ES, FR, GB, IT, LI, NL, SE, IE				
JP 2002508515	T	20020319	JP 2000-539345	19981216
PRIORITY APPLN. INFO.:				
			US 1997-69943P	P 19971217
			US 1998-162586	A 19980929
			WO 1998-US26781	W 19981216

AB The present method generally comprises mixing a pre-selected, detectable target with a sample of complex biol. material to produce a first, sample/target mixture capillary electrophoresis apparatus. Subsequently, the first mixture is mixed with a pre-selected, tight-binding competitive ligand (TBCL), prior to produce a second, sample/target/TBCL mixture, for a predetd. optimal incubation period sufficient to allow the TBCL to bind a pre-selected percentage of the available target in the absence of any other ligand. An aliquot of the second mixture is subsequently subjected to pre-optimized capillary electrophoresis, during which the migration of the target is monitored. The presence of a potential new compound is indicated by the increase in the peak area of the unbound target peak and/or decrease in the peak area of the TBCL/target complex peak. A capillary electrophoretic profile of the second mixture is produced, which may be compared to a reference standard. The reference standard typically comprises a capillary electrophoretic profile or migration pattern of the target when mixed with a TBCL in an absence of any other competing ligand under similar, pre-selected capillary electrophoretic conditions.

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d his

(FILE 'HOME' ENTERED AT 11:40:15 ON 08 MAR 2007)

FILE 'CAPLUS, EMBASE, BIOSIS, MEDLINE' ENTERED AT 11:40:36 ON 08 MAR 2007

L1 237505 SPOT OR (PEPTIDE (W) SYNTHESIS) OR (EPITOPE (W) SYNTHESIS)
 L2 156527 MICROWAVE OR EHF
 L3 11 L1 (W) L2
 L4 11 DUP REM L3 (0 DUPLICATES REMOVED)
 L5 6070 COMBINATORIAL (3A) LIBRARY AND PEPTIDE
 L6 19 L5 AND MICROWAVE
 L7 16 DUP REM L6 (3 DUPLICATES REMOVED)

```
=> l1 and l2
L8      768 L1 AND L2

=> l1 (3a) l2
L9      111 L1 (3A) L2

=> dup rem l9
PROCESSING COMPLETED FOR L9
L10     90 DUP REM L9 (21 DUPLICATES REMOVED)

=> l10 - l3
MISSING OPERATOR L10 - L3
The search profile that was entered contains terms or
nested terms that are not separated by a logical operator.

=> l10 rem l3
MISSING OPERATOR L10 REM
The search profile that was entered contains terms or
nested terms that are not separated by a logical operator.

=> d his
```

(FILE 'HOME' ENTERED AT 11:40:15 ON 08 MAR 2007)

FILE 'CAPLUS, EMBASE, BIOSIS, MEDLINE' ENTERED AT 11:40:36 ON 08 MAR 2007

```
L1      237505 SPOT OR (PEPTIDE (W) SYNTHESIS) OR (EPITOPE (W) SYNTHESIS)
L2      156527 MICROWAVE OR EHF
L3      11 L1 (W) L2
L4      11 DUP REM L3 (0 DUPLICATES REMOVED)
L5      6070 COMBINATORIAL (3A) LIBRARY AND PEPTIDE
L6      19 L5 AND MICROWAVE
L7      16 DUP REM L6 (3 DUPLICATES REMOVED)
L8      768 L1 AND L2
L9      111 L1 (3A) L2
L10     90 DUP REM L9 (21 DUPLICATES REMOVED)
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=> d ibib abs total
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L10 ANSWER 1 OF 90 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on STN
ACCESSION NUMBER: 2007:17848 BIOSIS
DOCUMENT NUMBER: PREV200700015520
TITLE: Development of a novel approach to determine heating
pattern using computer vision and chemical marker (M-2)
yield.
AUTHOR(S): Pandit, R. B.; Tang, J. [Reprint Author]; Liu, F.; Pitts,
M.
CORPORATE SOURCE: Washington State Univ, Dept Biol Syst Engrn, 213 LJ Smith
Hall, Pullman, WA 99164 USA
jtang@mail.wsu.edu
SOURCE: Journal of Food Engineering, (JAN 2007) Vol. 78, No. 2, pp.
522-528.
CODEN: JFOEDH. ISSN: 0260-8774.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 20 Dec 2006
Last Updated on STN: 20 Dec 2006
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AB In this study, a novel approach to determine heating patterns using
chemical marker (M-2) yield and computer vision was developed for packaged
foods after microwave sterilization. Due to various constraints of
temperature measurement devices such as fiber-optic temperature sensors,
thermocouples, and infrared sensors, there is a need to develop an
accurate and rapid method to determine heating patterns in packaged food
trays after microwave sterilization. Yield of a heat sensitive chemical
marker (M-2) was used as a coloring agent and digital images of the
processed trays were analyzed using a computer vision system. A script in
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IMAQ vision builder software was written to obtain a 3-D heating pattern for the sterilized trays. Relationship between chemical marker (M-2) yield and cumulative thermal lethality (F-0) was also studied. Validation of the locations of cold and hot spots determined by computer vision were performed by fiber-optics temperature measurement sensor. Results show that computer vision in combination with chemical marker M-2 and other accessories can be used as a rapid, accurate and cost efficient tool to specify the location of cold and hot spots after microwave sterilization. (c) 2005 Elsevier Ltd. All rights reserved.

L10 ANSWER 2 OF 90 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2006:220494 CAPLUS
DOCUMENT NUMBER: 145:153898
TITLE: Finite cosmology and a CMB cold spot
AUTHOR(S): Adler, Ronald J.; Bjorken, James D.; Overduin, James M.
CORPORATE SOURCE: Gravity Probe B, Hansen Experimental Physics Laboratory, Stanford University, Stanford, CA, 94305, USA
SOURCE: Los Alamos National Laboratory, Preprint Archive, General Relativity and Quantum Cosmology (2006) 1-20, arXiv:gr-qc/0602102, 26 Feb 2006
CODEN: LNGRFS
URL: <http://xxx.lanl.gov/pdf/gr-qc/0602102>
PUBLISHER: Los Alamos National Laboratory
DOCUMENT TYPE: Preprint
LANGUAGE: English

AB The standard cosmol. model posits a spatially flat universe of infinite extent. However, no observation, even in principle, could verify that the matter extends to infinity. In this work we model the universe as a finite spherical ball of dust and dark energy, and obtain a lower limit estimate of its mass and present size: the mass is at least $5 + 10^{23}$ M.sun. and the present radius is at least 50 Gly. If we are not too far from the dust-ball edge we might expect to see a cold spot in the cosmic microwave background, and there might be suppression of the low multipoles in the angular power spectrum. Thus the model may be testable, at least in principle. We also obtain and discuss the geometry exterior to the dust ball; it is Schwarzschild-de Sitter with a naked singularity, and provides an interesting picture of cosmogenesis. Finally we briefly sketch how radiation and inflation eras may be incorporated into the model.

REFERENCE COUNT: 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 3 OF 90 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2006:1036337 CAPLUS
DOCUMENT NUMBER: 145:386125
TITLE: Organic electroluminescence device and manufacturing method
INVENTOR(S): Koshiyama, Yoshiki; Nakamura, Akio
PATENT ASSIGNEE(S): Toppan Printing Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 10pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2006269247	A	20061005	JP 2005-85588	20050324
PRIORITY APPLN. INFO.:			JP 2005-85588	20050324
AB The invention refers to an organic electroluminescence device and it manufacturing				

method, wherein an electroluminescent chip is sealed in a resin while being irradiated with simultaneous microwaves and IR radiation, and may also be up under neg. pressure as necessary in order to adequately remove water or solvent from the sealing resin and to prevent dark spots.

L10 ANSWER 4 OF 90 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on STN
ACCESSION NUMBER: 2007:23154 BIOSIS
DOCUMENT NUMBER: PREV200700036477
TITLE: Determination of an optimal solid support for use with microwave-assisted solid-phase peptide synthesis.
AUTHOR(S): Vigil-Cruz, Sandra C. [Reprint Author]; Peck, Angela M.; Aldrich, Jane V.
CORPORATE SOURCE: Univ Kansas, Dept Med Chem, Lawrence, KS 66045 USA
SOURCE: Blondelle, SE [Editor]. (2006) pp. 162-163. Understanding Biology Using Peptides. Publisher: SPRINGER, 233 SPRING STREET, NEW YORK, NY 10013, UNITED STATES. Meeting Info.: 19th American Peptide Symposium. San Diego, CA, USA. June 18 -23, 2005. Amer Peptide Soc; AAPPTec; Amer Peptide Co; Amer Hlth/GE Healthcare; Amgen Inc; BACHEM; BIOMOL Int; C S Bio Co; Cambridge Res Biochem; Chemico Int Inc; Chem Today; Eli Lilly & Co; ESCOM Sci Fdn; Genentech; Hoffman-La Roche Inc; Merck Res Lab; Midwest Bio-Tech Inc; NeoMPS Inc; New England Biolabs Inc; Novo Nordisk A/S; Peptides Int Inc; PharmaChem; PolyPeptide Lab Inc; RSP Amino Acide LLC; Senn Chem USA; Sinopep Pharmaceut Inc; SynPep Corp; Synthetech Inc; UCB Bioproducts Inc. ISBN: 0-387-26569-4(H).
DOCUMENT TYPE: Book; (Book Chapter)
Conference; (Meeting)
LANGUAGE: English
ENTRY DATE: Entered STN: 27 Dec 2006
Last Updated on STN: 27 Dec 2006

L10 ANSWER 5 OF 90 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on STN
ACCESSION NUMBER: 2007:23147 BIOSIS
DOCUMENT NUMBER: PREV200700036470
TITLE: Microwave assisted peptide synthesis - A tool to replace classical SPPS?.
AUTHOR(S): Rybka, Andreas [Reprint Author]; Frank, Hans-Georg.
CORPORATE SOURCE: AplaGen GmbH, Arnold Sommerfeld Ring 2, D-52499 Baesweiler, Germany
SOURCE: Blondelle, SE [Editor]. (2006) pp. 148-149. Understanding Biology Using Peptides. Publisher: SPRINGER, 233 SPRING STREET, NEW YORK, NY 10013, UNITED STATES. Meeting Info.: 19th American Peptide Symposium. San Diego, CA, USA. June 18 -23, 2005. Amer Peptide Soc; AAPPTec; Amer Peptide Co; Amer Hlth/GE Healthcare; Amgen Inc; BACHEM; BIOMOL Int; C S Bio Co; Cambridge Res Biochem; Chemico Int Inc; Chem Today; Eli Lilly & Co; ESCOM Sci Fdn; Genentech; Hoffman-La Roche Inc; Merck Res Lab; Midwest Bio-Tech Inc; NeoMPS Inc; New England Biolabs Inc; Novo Nordisk A/S; Peptides Int Inc; PharmaChem; PolyPeptide Lab Inc; RSP Amino Acide LLC; Senn Chem USA; Sinopep Pharmaceut Inc; SynPep Corp; Synthetech Inc; UCB Bioproducts Inc. ISBN: 0-387-26569-4(H).
DOCUMENT TYPE: Book; (Book Chapter)
Conference; (Meeting)
LANGUAGE: English
ENTRY DATE: Entered STN: 27 Dec 2006
Last Updated on STN: 27 Dec 2006

L10 ANSWER 6 OF 90 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on STN

ACCESSION NUMBER: 2007:23146 BIOSIS
DOCUMENT NUMBER: PREV200700036469
TITLE: Microwave-assisted solid-phase peptide
synthesis (MW-SPPS) on CLEAR supports.
AUTHOR(S): Carenbauer, Anne L. [Reprint Author]; Cecil, Matthew R.;
Czerwinski, Andrzej; Darlak, Krzysztof; Darlak, Mirosława;
Long, DeAnna Wiegandt; Valenzuela, Francisco; Barany,
George
CORPORATE SOURCE: Peptides Int Inc, 11621 Electron Dr, Louisville, KY 40299
USA
SOURCE: Blondelle, SE [Editor]. (2006) pp. 146-147. Understanding
Biology Using Peptides.
Publisher: SPRINGER, 233 SPRING STREET, NEW YORK, NY 10013,
UNITED STATES.
Meeting Info.: 19th American Peptide Symposium. San Diego,
CA, USA. June 18 -23, 2005. Amer Peptide Soc; AAPPTec; Amer
Peptide Co; Amer Hlth/GE Healthcare; Amgen Inc; BACHEM;
BIOMOL Int; C S Bio Co; Cambridge Res Biochem; Chemico Int
Inc; Chem Today; Eli Lilly & Co; ESCOM Sci Fdn; Genentech;
Hoffman-La Roche Inc; Merck Res Lab; Midwest Bio-Tech Inc;
NeoMPS Inc; New England Biolabs Inc; Novo Nordisk A/S;
Peptides Int Inc; PharmaChem; PolyPeptide Lab Inc; RSP
Amino Acids LLC; Senn Chem USA; Sinopep Pharmaceut Inc;
SynPep Corp; Synthetech Inc; UCB Bioproducts Inc.
ISBN: 0-387-26569-4(H).
DOCUMENT TYPE: Book; (Book Chapter)
Conference; (Meeting)
LANGUAGE: English
ENTRY DATE: Entered STN: 27 Dec 2006
Last Updated on STN: 27 Dec 2006

L10 ANSWER 7 OF 90 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2006:114176 CAPLUS
DOCUMENT NUMBER: 144:334466
TITLE: Fireball ejection from a molten hot spot to air by
localized microwaves
AUTHOR(S): Dikhtyar, Vladimir; Jerby, Eli
CORPORATE SOURCE: Faculty of Engineering, Tel Aviv University, Ramat
Aviv, 69978, Israel
SOURCE: Physical Review Letters (2006), 96(4),
045002/1-045002/4
CODEN: PRLTAO; ISSN: 0031-9007
PUBLISHER: American Physical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A phenomenon of fireball ejection from hot spots in solid materials
(silicon, germanium, glass, ceramics, basalt, etc.) to the atmosphere is
presented. The hot spot is created in the substrate material by the
microwave-drill mechanism [Jerby et al., 2002]. The vaporized drop
evolved from the hot spot is blown up, and forms a stable fireball buoyant
in the air. The exptl. observations of fireball ejection from silicate
hot spots are referred to the theory of Abrahamson and Dinniss (2000),
suggesting a mechanism for ball-lightning initiation in nature. The
fireballs observed in the authors' expts. tend to absorb the available
microwave power entirely, similarly to the plasmon resonance effect in
submicron wavelengths [Nie and Emory, 1997].
REFERENCE COUNT: 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 8 OF 90 CAPLUS COPYRIGHT 2007 ACS on STN DUPLICATE 1

ACCESSION NUMBER: 2006:374345 CAPLUS
DOCUMENT NUMBER: 145:62756
TITLE: Efficient synthesis of small molecule microarrays:
optimization of the microarray synthesis platform and
examination of microwave and conventional heating

methods
AUTHOR(S): Bowman, Matthew D.; Jacobson, Megan M.; Pujanauski,
Brian G.; Blackwell, Helen E.
CORPORATE SOURCE: Department of Chemistry, University of
Wisconsin-Madison, Madison, WI, 53706-1322, USA
SOURCE: Tetrahedron (2006), 62(19), 4715-4727
CODEN: TETRAB; ISSN: 0040-4020
PUBLISHER: Elsevier B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 145:62756
AB A method for the efficient construction of small mol. microarrays using
microwave-assisted SPOT-synthesis is reported.
Microarray of 1,3-diphenylpropenones (chalcones) were synthesized rapidly
and in high purity starting from robust, Wang-linker-derivatized planar
supports. The entire chalcone microarray construction process was
optimized and evaluated the efficiency and utility of microwave-assisted
reactions in array synthesis. Microwave heating was found to be most
beneficial for reactions that require temps. greater than the b.ps. of the
solvents. These microwave-assisted conditions permitted straightforward
access to microarrays of 2,4,6-triarylpyridine-derived from the original
chalcone scaffold.
REFERENCE COUNT: 48 THERE ARE 48 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 9 OF 90 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2006:641120 CAPLUS
DOCUMENT NUMBER: 145:249499
TITLE: Microwave-assisted cyclization of peptides on SynPhase
lanterns
AUTHOR(S): Monroc, Sylvie; Feliu, Lidia; Planas, Marta; Bardaji,
Eduard
CORPORATE SOURCE: Laboratori d'Innovacio en Processos i Productes de
Sintesi Organica, Department de Quimica, Universitat
de Girona, Girona, 17071, Spain
SOURCE: Synlett (2006), (9), 1311-1314
CODEN: SYNLES; ISSN: 0936-5214
PUBLISHER: Georg Thieme Verlag
DOCUMENT TYPE: Journal
LANGUAGE: English
AB SynPhase lanterns and microwave irradiation have been combined to set up an
efficient and rapid cyclization strategy of short peptides.
REFERENCE COUNT: 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 10 OF 90 EMBASE COPYRIGHT (c) 2007 Elsevier B.V. All rights
reserved on STN DUPLICATE 2
ACCESSION NUMBER: 2006276051 EMBASE
TITLE: Microwave drilling of bones.
AUTHOR: Eshet Y.; Mann R.R.; Anaton A.; Yacoby T.; Gefen A.; Jerby
E.
CORPORATE SOURCE: E. Jerby, Departments of Physical Electronics, Faculty of
Engineering, Tel-Aviv University, Ramat Aviv, Tel Aviv
69978, Israel. jerby@eng.tau.ac.il
SOURCE: IEEE Transactions on Biomedical Engineering, (2006) Vol.
53, No. 6, pp. 1174-1182. arn. 1634511.
Refs: 22
ISSN: 0018-9294 CODEN: IEBEAX
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 033 Orthopedic Surgery
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 10 Jul 2006
Last Updated on STN: 10 Jul 2006

AB This paper presents a feasibility study of drilling in fresh wet bone tissue in vitro using the microwave drill method [Jerby , 2002], toward testing its applicability in orthopaedic surgery. The microwave drill uses a near-field focused energy (typically, power under .apprx.200 W at 2.45-GHz frequency) in order to penetrate bone in a drilling speed of .apprx.1 mm/s. The effect of microwave drilling on mechanical properties of whole ovine tibial and chicken femoral bones drilled in vitro was studied using three-point-bending strength and fatigue tests. Properties were compared to those of geometrically similar bones that were equivalently drilled using the currently accepted mechanical rotary drilling method. Strength of mid-shaft, elastic moduli, and cycles to failure in fatigue were statistically indistinguishable between specimen groups assigned for microwave and mechanical drilling. Carbonized margins around the microwave-drilled hole were .apprx.15% the hole diameter. Optical and scanning electron microscopy studies showed that the microwave drill produces substantially smoother holes in cortical bone than those produced by a mechanical drill. The hot spot produced by the microwave drill has the potential for overcoming two major problems presently associated with mechanical drilling in cortical and trabecular bone during orthopaedic surgeries: formation of debris and rupture of bone vasculature during drilling. .COPYRGT. 2006 IEEE.

L10 ANSWER 11 OF 90 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2006:16369 CAPLUS

DOCUMENT NUMBER: 144:254374

TITLE: Microwave-assisted coupling with DIC/HOBt for the synthesis of difficult peptoids and fluorescently labeled peptides-a gentle heat goes a long way

AUTHOR(S): Fara, Mario A.; Diaz-Mochon, Juan Jose; Bradley, Mark

CORPORATE SOURCE: School of Chemistry, University of Edinburgh, Edinburgh, EH9 3JJ, UK

SOURCE: Tetrahedron Letters (2006), 47(6), 1011-1014

CODEN: TELEAY; ISSN: 0040-4039

PUBLISHER: Elsevier B.V.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Mild thermal effects (Arrhenius based) achieved with microwave heating proved to be highly successful in enabling rapid and efficient secondary amine couplings and the labeling of peptides with a variety of fluorophores and quenchers in high yields and purities with just traditional, yet robust, HOBt/DIC chemical

REFERENCE COUNT: 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT.

L10 ANSWER 12 OF 90 CAPLUS COPYRIGHT 2007 ACS on STN DUPLICATE 3

ACCESSION NUMBER: 2006:742482 CAPLUS

DOCUMENT NUMBER: 146:6562

TITLE: Kinetics of chemical marker M-2 formation in mashed potato - a tool to locate cold spots under microwave sterilization

AUTHOR(S): Pandit, R. B.; Tang, J.; Mikhaylenko, G.; Liu, F.

CORPORATE SOURCE: Department of Biological Systems Engineering, Washington State University, Pullman, WA, 99164-6120, USA

SOURCE: Journal of Food Engineering (2006), 76(3), 353-361

CODEN: JFOEDH; ISSN: 0260-8774

PUBLISHER: Elsevier B.V.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Chemical marker M-2 (4-hydroxy-5-methyl-3(2H)-furanone) can be used as a tool to evaluate heating patterns of foods in microwave sterilization. This research studied the kinetics of the M-2 formation in mashed potato as influenced by temperature and salt content. Mashed potato (83.12% moisture content) with 1.5% D-ribose was heated in the capillary tubes at four temperature levels. Chemical marker M-2 yield was obtained using high performance

liquid chromatog. Formation of M-2 in plain mashed potato was a first-order reaction. The rate constant changed with temperature following an Arrhenius relationship. For kinetic parameters estimation, one-step non-linear regression was the best followed by modified two-step regression. Amino acid was the limiting element in the formation M-2 in mashed potato. The salt content of 0-1% had no influence on the chemical marker yield. Addition

of

L-lysine more than 1% resulted in too dark color after sterilization treatments.

REFERENCE COUNT: 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 13 OF 90 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2007:66246 CAPLUS

TITLE: Microwave heating for solid-phase peptide synthesis: general evaluation and application to 15-mer phosphopeptides

AUTHOR(S): Brandt, Malene; Gammeltoft, Steen; Jensen, Knud J.

CORPORATE SOURCE: Department of Natural Sciences, Section for Bioorganic Chemistry, Royal Veterinary and Agricultural University, Frederiksberg, DK-1871, Den.

SOURCE: International Journal of Peptide Research and Therapeutics (2006), 12(4), 349-357

CODEN: IJPRFC; ISSN: 1573-3149

PUBLISHER: Springer

DOCUMENT TYPE: Journal

LANGUAGE: English

AB A comprehensive study of microwave heating in manual solid-phase peptide synthesis is presented. Three different solid supports and three different linkers were evaluated for the synthesis of one short and two medium length peptides, including a phosphopeptide. Microwave heating to 60°C was applied to different kinds of amide bond formation, reductive amination, removal of the Fmoc protecting group, and to the acidolytic release of peptides from different handles. Using microwave heating, reaction times were significantly reduced, while maintaining the high purity of the crude products. However, control expts. showed that reaction times as short as 3-4 min at rt, at least for some applications, were sufficient for acylations (couplings). While microwave heating could be used in all steps in solid-phase peptide synthesis, particularly relatively slow steps benefited from this method.

REFERENCE COUNT: 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 14 OF 90 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on STN

ACCESSION NUMBER: 2006:670872 BIOSIS

DOCUMENT NUMBER: PREV200600677913

TITLE: An efficient microwave-assisted solid phase synthesis of gramicidin A for studies in bilayer-lipid membrane.

AUTHOR(S): Rizzolo, F. [Reprint Author]; Sabatino, G.; Paolini, I.; Alcaro, M. C.; Moncelli, M. R.; Guidelli, R.; Chelli, M.; Papini, A. M.; Rovero, P.

CORPORATE SOURCE: Univ Florence, Lab Peptide and Prot Chem and Biol, Sesto Fiorentino, Italy

SOURCE: Journal of Peptide Science, (2006) Vol. 12, No. Suppl. S, pp. 131.

Meeting Info.: 29th European Peptide Symposium. Gdansk, POLAND. September 03 -08, 2006.

ISSN: 1075-2617.

DOCUMENT TYPE: Conference; (Meeting)

Conference; (Meeting Poster)

LANGUAGE: English

ENTRY DATE: Entered STN: 6 Dec 2006

Last Updated on STN: 6 Dec 2006

L10 ANSWER 15 OF 90 CAPLUS COPYRIGHT 2007 ACS on STN DUPLICATE 4

ACCESSION NUMBER: 2005:1257634 CAPLUS
DOCUMENT NUMBER: 144:171229
TITLE: Microwave-Assisted Parallel Synthesis of a 14-Helical β -Peptide Library
AUTHOR(S): Murray, Justin K.; Gellman, Samuel H.
CORPORATE SOURCE: Department of Chemistry, University of Wisconsin, Madison, WI, 53706, USA
SOURCE: Journal of Combinatorial Chemistry (2006), 8(1), 58-65
CODEN: JCCHFF; ISSN: 1520-4766
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 144:171229

AB To facilitate the preparation of β -peptide libraries in parallel, the authors have adapted reaction conditions for the solid-phase synthesis of 14-helical β -peptides for use in a multimode microwave reactor. The low temperature/pressure requirements of microwave-assisted β -peptide synthesis were found to be compatible with multiwell filter plates composed of polypropylene. Microwave heating of the 96-well plate was sufficiently homogeneous to allow the rapid preparation of a β -peptide library in acceptable purity.

REFERENCE COUNT: 54 THERE ARE 54 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 16 OF 90 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2006:505918 CAPLUS
TITLE: Microwave-assisted peptide synthesis
AUTHOR(S): Bacsá, Bernadett; Gombosuren, Naran; Kappe, C. Oliver; Dibo, Gabor
CORPORATE SOURCE: Institute of Chemistry, Eotvos Lorand University, Budapest, 1518, Hung.
SOURCE: Peptide Science (2006), Volume Date 2005, 42nd, 33-34
CODEN: PSCIFQ; ISSN: 1344-7661
PUBLISHER: Japanese Peptide Society
DOCUMENT TYPE: Journal
LANGUAGE: English

AB A microwave-assisted organic synthesis strategy was developed for the preparation of WDTVRISFK in a MicroKan capsule by using a monomode microwave reactor. For the synthesis, standard Fmoc/Boc orthogonal protection was used. Microwave irradiation with intermittent cooling to sub-ambient temperature was performed during both the coupling and deprotection steps. Compared to conventional SPPS, the same final product was obtained in much shorter time, better yield and comparable purity under microwave conditions.

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 17 OF 90 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2005:257387 CAPLUS
DOCUMENT NUMBER: 142:482304
TITLE: Application of Microwave Irradiation to the Synthesis of 14-Helical β -Peptides
AUTHOR(S): Murray, Justin K.; Gellman, Samuel H.
CORPORATE SOURCE: Department of Chemistry, University of Wisconsin, Madison, WI, 53706, USA
SOURCE: Organic Letters (2005), 7(8), 1517-1520
CODEN: ORLEF7; ISSN: 1523-7060
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 142:482304

AB The authors have evaluated the effects of microwave irradiation on the solid-phase synthesis of β -peptides. Sequences designed to adopt the

14-helix, especially those containing the structure-promoting residue trans-2-aminocyclohexanecarboxylic acid (ACHC), suffer from poor synthetic efficiency under standard SPPS conditions. A comparison of microwave and conventional heating showed that both provide excellent synthetic results for shorter sequences; however, the authors have identified a clear benefit from microwave irradiation for longer β -peptides.

REFERENCE COUNT: 41 THERE ARE 41 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 18 OF 90 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2005:192866 CAPLUS

TITLE: Total chemical synthesis of glycopeptides and glycoproteins

AUTHOR(S): Bejugam, Malleshham; Flitsch, Sabine

CORPORATE SOURCE: School of Chemistry, University of Edinburgh, Edinburgh, EH9 3JJ, UK

SOURCE: Abstracts of Papers, 229th ACS National Meeting, San Diego, CA, United States, March 13-17, 2005 (2005), ORGN-847. American Chemical Society: Washington, D. C.

CODEN: 69GQMP

DOCUMENT TYPE: Conference; Meeting Abstract

LANGUAGE: English

AB The total synthesis of small and medium sized glycoproteins is highly challenging but is within the reach of the synthetic organic chemist. The most promising strategy is outlined in Scheme 1 and involves the synthesis of peptide and glycopeptide fragments with suitable termini to allow for native chemical ligation, as pioneered by Kent and co-workers. Key intermediates for such synthetic strategy are glycopeptides, which in turn are accessible through Fmoc-solid phase peptide synthesis using glycoamino acids at the required glycosylation sites. In this context we have developed fast and efficient methodologies that can give us access to gram quantities of glycoamino acids. Kochetkov amination of fully unprotected mono-, di- and trisaccharides under microwave irradiation results in one step selective formation of beta-glycosyl amines, which can subsequently be acylated to generate Fmoc-protected glycoamino acids bearing the naturally occurring N-glycan sidechains (Scheme 2). These glycoamino acids have been incorporated into a glycopeptide that is part of our ultimate glycoprotein target - the modules MCP1 and MCP2 that are part of the human receptor responsible for binding to the measles virus. Given the demands on peptide synthesis in glycoprotein synthesis, we have also investigated the use of microwave assisted solid phase peptide synthesis, which is dramatically reduces synthesis time. Results from such studies and subsequent native chemical ligation reactions will be reported.

L10 ANSWER 19 OF 90 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2005:576091 CAPLUS

DOCUMENT NUMBER: 144:212997

TITLE: Microwave irradiated peptide synthesis

AUTHOR(S): Ohtsuka, Yasuhiko; Uchibayashi, Keiichi; Nishida, Kunitada; Ohuchi, Shokichi

CORPORATE SOURCE: Graduate School of Life Science and Systems Engineering, Kyushu Institute of Technology, Kitakyushu, 808-0196, Japan

SOURCE: Peptide Science (2005), Volume Date 2004, 41st, 673-674

CODEN: PSCIFQ; ISSN: 1344-7661

PUBLISHER: Japanese Peptide Society

DOCUMENT TYPE: Journal

LANGUAGE: English

AB A symposium report. Microwave irradiation was applied to the peptide synthetic methods as coupling reaction and protecting reactions. The use of microwave was achieved the shortening reaction time and the effect of

no-thermal effect of microwave was observed in nonpolar solvent.

L10 ANSWER 20 OF 90 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on
STN

ACCESSION NUMBER: 2006:29975 BIOSIS
DOCUMENT NUMBER: PREV200600030543
TITLE: Determination of an optimal solid support for use with
microwave-assisted solid-phase peptide
synthesis.
AUTHOR(S): Vigil-Cruz, Sandra C. [Reprint Author]; Peck, Angela M.;
Aldrich, Jane V.
CORPORATE SOURCE: Univ Kansas, Dept Med Chem, Lawrence, KS 66045 USA
SOURCE: Biopolymers, (2005) Vol. 80, No. 4, pp. 534.
Meeting Info.: 19th American Peptide Symposium. San Diego,
CA, USA. June 18 -23, 2005. Amer Peptide Soc; AAPPTec; Amer
Peptide Co; Amer Hlth/GE Healthcare; Amgen Inc; BACHEM;
BIOMOL Int; C S Bio Co; Cambridge Res Biochem; Chemico Int
Inc; Chem Today; Eli Lilly & Co; ESCOM Sci Fdn; Genentech;
Hoffman-La Roche Inc; Merck Res Lab; Midwest Bio-Tech Inc;
NeoMPS Inc; New England Biolabs Inc; Novo Nordisk A/S;
Peptides Int Inc; PharmaChem; PolyPeptide Lab Inc; RSP
Amino Acids LLC; Senn Chem USA; Sinopep Pharmaceut Inc;
SynPep Corp; Synthetech Inc; UCB Bioproducts Inc.
CODEN: BIPMAA. ISSN: 0006-3525.
DOCUMENT TYPE: Conference; (Meeting)
Conference; (Meeting Poster)
LANGUAGE: English
ENTRY DATE: Entered STN: 28 Dec 2005
Last Updated on STN: 28 Dec 2005

L10 ANSWER 21 OF 90 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on
STN

ACCESSION NUMBER: 2006:29963 BIOSIS
DOCUMENT NUMBER: PREV200600030531
TITLE: Optimization of microwave enhanced solid phase
peptide synthesis.
AUTHOR(S): Collins, J. M. [Reprint Author]; Cox, Z. J.
CORPORATE SOURCE: CEM Corp, Matthews, NC 28106 USA
SOURCE: Biopolymers, (2005) Vol. 80, No. 4, pp. 532.
Meeting Info.: 19th American Peptide Symposium. San Diego,
CA, USA. June 18 -23, 2005. Amer Peptide Soc; AAPPTec; Amer
Peptide Co; Amer Hlth/GE Healthcare; Amgen Inc; BACHEM;
BIOMOL Int; C S Bio Co; Cambridge Res Biochem; Chemico Int
Inc; Chem Today; Eli Lilly & Co; ESCOM Sci Fdn; Genentech;
Hoffman-La Roche Inc; Merck Res Lab; Midwest Bio-Tech Inc;
NeoMPS Inc; New England Biolabs Inc; Novo Nordisk A/S;
Peptides Int Inc; PharmaChem; PolyPeptide Lab Inc; RSP
Amino Acids LLC; Senn Chem USA; Sinopep Pharmaceut Inc;
SynPep Corp; Synthetech Inc; UCB Bioproducts Inc.
CODEN: BIPMAA. ISSN: 0006-3525.
DOCUMENT TYPE: Conference; (Meeting)
Conference; (Meeting Poster)
LANGUAGE: English
ENTRY DATE: Entered STN: 28 Dec 2005
Last Updated on STN: 28 Dec 2005

L10 ANSWER 22 OF 90 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on
STN

ACCESSION NUMBER: 2006:29959 BIOSIS
DOCUMENT NUMBER: PREV200600030527
TITLE: Microwave assisted peptide
synthesis - A tool to replace classical SPPs?
AUTHOR(S): Frank, H.-G. [Reprint Author]; Rybka, A.
CORPORATE SOURCE: AplaGen GmbH, D-52499 Baesweiler, Germany
SOURCE: Biopolymers, (2005) Vol. 80, No. 4, pp. 531.

Meeting Info.: 19th American Peptide Symposium. San Diego, CA, USA. June 18 -23, 2005. Amer Peptide Soc; AAPPTec; Amer Peptide Co; Amer Hlth/GE Healthcare; Amgen Inc; BACHEM; BIOMOL Int; C S Bio Co; Cambridge Res Biochem; Chemico Int Inc; Chem Today; Eli Lilly & Co; ESCOM Sci Fdn; Genentech; Hoffman-La Roche Inc; Merck Res Lab; Midwest Bio-Tech Inc; NeoMPS Inc; New England BioLabs Inc; Novo Nordisk A/S; Peptides Int Inc; PharmaChem; PolyPeptide Lab Inc; RSP Amino Acide LLC; Senn Chem USA; Sinopep Pharmaceut Inc; SynPep Corp; Synthetech Inc; UCB Bioproducts Inc. CODEN: BIPMAA. ISSN: 0006-3525.

DOCUMENT TYPE: Conference; (Meeting)
Conference; (Meeting Poster)
LANGUAGE: English
ENTRY DATE: Entered STN: 28 Dec 2005
Last Updated on STN: 28 Dec 2005

L10 ANSWER 23 OF 90 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on STN

ACCESSION NUMBER: 2006:29951 BIOSIS
DOCUMENT NUMBER: PREV200600030519
TITLE: Effects of coupling reagent, base, and solvent choice on microwave-assisted solid-phase peptide synthesis.
AUTHOR(S): Aral, Jennifer [Reprint Author]; Long, Jason; Shah, Ankita; Diamond, Stephanie; Holder, Jerry Ryan; Miranda, Les
CORPORATE SOURCE: Amgen Inc, Peptide Res and Discovery, Thousand Oaks, CA 91320 USA
SOURCE: Biopolymers, (2005) Vol. 80, No. 4, pp. 530.
Meeting Info.: 19th American Peptide Symposium. San Diego, CA, USA. June 18 -23, 2005. Amer Peptide Soc; AAPPTec; Amer Peptide Co; Amer Hlth/GE Healthcare; Amgen Inc; BACHEM; BIOMOL Int; C S Bio Co; Cambridge Res Biochem; Chemico Int Inc; Chem Today; Eli Lilly & Co; ESCOM Sci Fdn; Genentech; Hoffman-La Roche Inc; Merck Res Lab; Midwest Bio-Tech Inc; NeoMPS Inc; New England BioLabs Inc; Novo Nordisk A/S; Peptides Int Inc; PharmaChem; PolyPeptide Lab Inc; RSP Amino Acide LLC; Senn Chem USA; Sinopep Pharmaceut Inc; SynPep Corp; Synthetech Inc; UCB Bioproducts Inc. CODEN: BIPMAA. ISSN: 0006-3525.
DOCUMENT TYPE: Conference; (Meeting)
Conference; (Meeting Poster)
LANGUAGE: English
ENTRY DATE: Entered STN: 28 Dec 2005
Last Updated on STN: 28 Dec 2005

L10 ANSWER 24 OF 90 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on STN

ACCESSION NUMBER: 2006:29952 BIOSIS
DOCUMENT NUMBER: PREV200600030520
TITLE: Exploring microwave-assisted peptide chemistry to overcome difficult synthetic sequences.
AUTHOR(S): Holder, Jerry Ryan [Reprint Author]; Long, Jason; Miranda, Les P.
CORPORATE SOURCE: Amgen Inc, Peptide Res and Discovery, Thousand Oaks, CA 91320 USA
SOURCE: Biopolymers, (2005) Vol. 80, No. 4, pp. 530.
Meeting Info.: 19th American Peptide Symposium. San Diego, CA, USA. June 18 -23, 2005. Amer Peptide Soc; AAPPTec; Amer Peptide Co; Amer Hlth/GE Healthcare; Amgen Inc; BACHEM; BIOMOL Int; C S Bio Co; Cambridge Res Biochem; Chemico Int Inc; Chem Today; Eli Lilly & Co; ESCOM Sci Fdn; Genentech; Hoffman-La Roche Inc; Merck Res Lab; Midwest Bio-Tech Inc; NeoMPS Inc; New England BioLabs Inc; Novo Nordisk A/S; Peptides Int Inc; PharmaChem; PolyPeptide Lab Inc; RSP

Amino Acide LLC; Senn Chem USA; Sinopep Pharmaceut Inc;
SynPep Corp; Synthetech Inc; UCB Bioproducts Inc.
CODEN: BIPMAA. ISSN: 0006-3525.

DOCUMENT TYPE: Conference; (Meeting)
Conference; (Meeting Poster)
LANGUAGE: English
ENTRY DATE: Entered STN: 28 Dec 2005
Last Updated on STN: 28 Dec 2005

L10 ANSWER 25 OF 90 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on
STN

ACCESSION NUMBER: 2006:29955 BIOSIS
DOCUMENT NUMBER: PREV200600030523
TITLE: A comparative study into the microwave
-accelerated peptide synthesis of long
peptides.
AUTHOR(S): Collins, M. [Reprint Author]; White, P. D.
CORPORATE SOURCE: CEM Corp, Matthews, NC 28106 USA
SOURCE: Biopolymers, (2005) Vol. 80, No. 4, pp. 530.
Meeting Info.: 19th American Peptide Symposium. San Diego,
CA, USA. June 18 -23, 2005. Amer Peptide Soc; AAPPTec; Amer
Peptide Co; Amer Hlth/GE Healthcare; Amgen Inc; BACHEM;
BIOMOL Int; C S Bio Co; Cambridge Res Biochem; Chemico Int
Inc; Chem Today; Eli Lilly & Co; ESCOM Sci Fdn; Genentech;
Hoffman-La Roche Inc; Merck Res Lab; Midwest Bio-Tech Inc;
NeoMPS Inc; New England Biolabs Inc; Novo Nordisk A/S;
Peptides Int Inc; PharmaChem; PolyPeptide Lab Inc; RSP
Amino Acide LLC; Senn Chem USA; Sinopep Pharmaceut Inc;
SynPep Corp; Synthetech Inc; UCB Bioproducts Inc.
CODEN: BIPMAA. ISSN: 0006-3525.

DOCUMENT TYPE: Conference; (Meeting)
Conference; (Meeting Poster)
LANGUAGE: English
ENTRY DATE: Entered STN: 28 Dec 2005
Last Updated on STN: 28 Dec 2005

L10 ANSWER 26 OF 90 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on
STN

ACCESSION NUMBER: 2006:29953 BIOSIS
DOCUMENT NUMBER: PREV200600030521
TITLE: Microwave-assisted solid-phase peptide
synthesis on clear supports.
AUTHOR(S): Carenbauer, A. L. [Reprint Author]; Cecil, M. R.;
Czerwinski, A.; Darlak, K.; Darlak, M.; Long, D. W.;
Valenzuela, F.; Barany, G.
CORPORATE SOURCE: Peptides Int Inc, Louisville, KY 40299 USA
SOURCE: Biopolymers, (2005) Vol. 80, No. 4, pp. 530.
Meeting Info.: 19th American Peptide Symposium. San Diego,
CA, USA. June 18 -23, 2005. Amer Peptide Soc; AAPPTec; Amer
Peptide Co; Amer Hlth/GE Healthcare; Amgen Inc; BACHEM;
BIOMOL Int; C S Bio Co; Cambridge Res Biochem; Chemico Int
Inc; Chem Today; Eli Lilly & Co; ESCOM Sci Fdn; Genentech;
Hoffman-La Roche Inc; Merck Res Lab; Midwest Bio-Tech Inc;
NeoMPS Inc; New England Biolabs Inc; Novo Nordisk A/S;
Peptides Int Inc; PharmaChem; PolyPeptide Lab Inc; RSP
Amino Acide LLC; Senn Chem USA; Sinopep Pharmaceut Inc;
SynPep Corp; Synthetech Inc; UCB Bioproducts Inc.
CODEN: BIPMAA. ISSN: 0006-3525.

DOCUMENT TYPE: Conference; (Meeting)
Conference; (Meeting Poster)
LANGUAGE: English
ENTRY DATE: Entered STN: 28 Dec 2005
Last Updated on STN: 28 Dec 2005

L10 ANSWER 27 OF 90 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2005:584968 CAPLUS
DOCUMENT NUMBER: 144:293043
TITLE: Solid-phase synthesis of vapreotide via microwave
AUTHOR(S): Zhu, Yi-shen; Qiu, Qian; Tu, Chun-yan; Wei, Ping
CORPORATE SOURCE: College of Life Science and Pharmaceutical
Engineering, Nanjing University of Technology,
Nanjing, 210009, Peop. Rep. China
SOURCE: Jingxi Huagong (2005), 22(5), 395-397
CODEN: JIHUFJ; ISSN: 1003-5214
PUBLISHER: Jingxi Huagong Bianjibu
DOCUMENT TYPE: Journal
LANGUAGE: Chinese

AB Vapreotide was prepared by solid-phase peptide synthesis and effect of microwave on the coupling reaction was investigated by orthogonal test. Results were analyzed by multiple nonlinear regression method and response surface optimization. The optimal coupling reaction conditions were: maximum reaction temperature 60 °C and reaction time 5 min, including 1 min for raising the temperature and 4 min for maintaining. Compared with the conventional method, the microwave-enhanced coupling reaction time was shortened about 12 .apprx. 36 times and less amts. of protected amino acids were needed. The yield of vapreotide was increased from 48% to 76%. It was identified by 1HNMNR, IR, MS and HRMS, and the results were consistent with the proposed structure.

L10 ANSWER 28 OF 90 CAPLUS COPYRIGHT 2007 ACS on STN DUPLICATE 5

ACCESSION NUMBER: 2005:1204500 CAPLUS
DOCUMENT NUMBER: 144:108578
TITLE: A novel route to synthesize Freidinger lactams by microwave irradiation
AUTHOR(S): Lama, T.; Campiglia, P.; Carotenuto, A.; Auriemma, L.; Gomez-Monterrey, I.; Novellino, E.; Grieco, P.
CORPORATE SOURCE: Department of Pharmaceutical and Toxicological Chemistry, University of Naples 'Federico II', Naples, I-80131, Italy
SOURCE: Journal of Peptide Research (2005), 66(5), 231-235
CODEN: JPERFA; ISSN: 1397-002X
PUBLISHER: Blackwell Publishing Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 144:108578

AB The incorporation of a Freidinger-like lactam structure into the backbone of peptides has been proven to be an useful strategy in the design of a variety of conformationally restricted targets. Several different strategies have been developed toward Freidinger lactams but no one resulted to be completely facile. Here, we report an efficient strategy that involves the iodo-derivs. in side chain of an appropriate amino acid used as electrophilic agent, and the standard solid phase peptide synthesis assisted by microwave irradiation. The methodol. developed could be useful to perform Freidinger-like lactams with defined stereochem. for routine use in solid phase peptide chemical

REFERENCE COUNT: 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 29 OF 90 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2005:183061 CAPLUS
DOCUMENT NUMBER: 142:434758
TITLE: "Hot spot" hydrocarbon oxidation catalysed by doped perovskites - towards cleaner diesel power
AUTHOR(S): Beckers, Jurriaan; Rothenberg, Gadi
CORPORATE SOURCE: Van't Hoff Institute for Molecular Sciences, University of Amsterdam, Amsterdam, 1018 WV, Neth.
SOURCE: ChemPhysChem (2005), 6(2), 223-225
CODEN: CPCHFT; ISSN: 1439-4235
PUBLISHER: Wiley-VCH Verlag GmbH & Co. KGaA

DOCUMENT TYPE: Journal
LANGUAGE: English
AB Spot the difference: Oxidation of propane/CO mixts. is efficiently catalyzed by mixed perovskite oxides heated directly using microwave irradiation. A set of twelve catalysts is screened for activity, selectivity and stability towards SO₂ poisoning. LaSrMn shows good activity, selectivity and heating capabilities, while LaSrCr is found to be superbly resistant to SO₂ poisoning.

REFERENCE COUNT: 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 30 OF 90 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2004:1127148 CAPLUS

DOCUMENT NUMBER: 142:56671

TITLE: Microwave-assisted peptide synthesis

INVENTOR(S): Collins, Jonathan Mckinno; Lambert, Joseph Joshua; Collins, Michael John

PATENT ASSIGNEE(S): Cem Corporation, USA

SOURCE: U.S. Pat. Appl. Publ., 20 pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004260059	A1	20041223	US 2003-604022	20030623
CA 2471687	A1	20041223	CA 2004-2471687	20040621
EP 1491552	A2	20041229	EP 2004-253742	20040623
EP 1491552	A3	20050316		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR				
JP 2005015483	A	20050120	JP 2004-184604	20040623
EP 1533025	A2	20050525	EP 2005-101287	20040623
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR				
US 2006025567	A1	20060202	US 2005-235027	20050926
US 2006025568	A1	20060202	US 2005-235328	20050926
US 2006025569	A1	20060202	US 2005-235329	20050926
PRIORITY APPLN. INFO.:			US 2003-604022	A 20030623
			EP 2004-253742	A3 20040623

AB An instrument and process for accelerating the solid-phase synthesis of peptides is disclosed. Microwave irradiation was carried out at each step of the process. The method includes the steps of deprotecting a protected first amino acid linked to a solid phase resin by admixing a deprotecting solution in a microwave transparent vessel, activating a second amino acid by adding an activating solution, coupling the second amino acid to the first acid, and cleaving the linked peptide from the solid phase resin by admixing a cleaving composition. The process was applied to the synthesis of peptides Asn-Gly-Val and Gly-Asn-Ile-Tyr-Asp-Ile-Ala-Ala-Gln-Val.

L10 ANSWER 31 OF 90 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on STN

ACCESSION NUMBER: 2006:624307 BIOSIS

DOCUMENT NUMBER: PREV200600643778

TITLE: Rapid microwave-assisted solid phase peptide synthesis.

AUTHOR(S): Erdelyi, Mate [Reprint Author]; Gogoll, Adolf

CORPORATE SOURCE: Uppsala Univ, Dept Organ Chem, Box 599, S-75124 Uppsala, Sweden

SOURCE: Chorev, M [Editor]; Sawyer, TK [Editor]. (2004) pp. 102-103. Peptide Revolution: Genomics, Proteomics & Therapeutics.

Publisher: AMER CHEMICAL SOC, 1155 SIXTEENTH ST NW,
WASHINGTON, DC 20036 USA.
Meeting Info.: 18th American Peptide Symposium. BOSTON, MA,
USA. July 19 -23, 2003.
ISBN: 0-9715560-1-6(H).

DOCUMENT TYPE: Book; (Book Chapter)
Conference; (Meeting)
LANGUAGE: English
ENTRY DATE: Entered STN: 22 Nov 2006
Last Updated on STN: 22 Nov 2006

L10 ANSWER 32 OF 90 CAPLUS COPYRIGHT 2007 ACS on STN DUPLICATE 6

ACCESSION NUMBER: 2004:400635 CAPLUS
DOCUMENT NUMBER: 141:139868
TITLE: Microwave-Accelerated SPOT
-Synthesis on Cellulose Supports
AUTHOR(S): Bowman, Matthew D.; Jeske, Ryan C.; Blackwell, Helen
E.
CORPORATE SOURCE: Department of Chemistry, University of Wisconsin
Madison, Madison, WI, 53706-1322, USA
SOURCE: Organic Letters (2004), 6(12), 2019-2022
CODEN: ORLEF7; ISSN: 1523-7060
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 141:139868

AB Microwave irradiation can dramatically accelerate reaction rates for spatially
addressable library synthesis on planar membrane supports. The
development of a robust support/linker system, microwave-assisted
synthesis of small mol. test libraries, and methods for solid-phase
scale-up on cellulose are described. The scope and limitations of
MW-assisted SPOT-synthesis through the preparation of libraries of
chalcone-derived mols. via Claisen-Schmidt condensation are described.
H₂NCH₂(CH₂CH₂O)3CH₂CH₂CH₂NH₂ was used as the spacer unit. Also prepared
from the supported chalcones were dihydropyrimidines.

REFERENCE COUNT: 36 THERE ARE 36 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 33 OF 90 CAPLUS COPYRIGHT 2007 ACS on STN DUPLICATE 7

ACCESSION NUMBER: 2004:74770 CAPLUS
DOCUMENT NUMBER: 140:287697
TITLE: An efficient approach for monosulfide bridge formation
in solid-phase peptide synthesis
AUTHOR(S): Campiglia, Pietro; Gomez-Monterrey, Isabel;
Longobardo, Luigi; Lama, Teresa; Novellino, Ettore;
Grieco, Paolo
CORPORATE SOURCE: Dipartimento di Chimica Farmaceutica e Tossicologica,
University of Naples "Federico II", Naples, 80131,
Italy
SOURCE: Tetrahedron Letters (2004), 45(7), 1453-1456
CODEN: TELEAY; ISSN: 0040-4039
PUBLISHER: Elsevier Science B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 140:287697

AB An efficient approach for the synthesis of cyclic peptides containing
unnatural thioether side-chain bridges, based on the use of
(2S)-9-fluorenylmethyl-2-[(tert-butoxycarbonyl)amino]-4-iodobutanoate and
its homolog 5-iodopentanoate, derived from Boc-L-Asp-OFm and Boc-L-Glu-OFm
(Boc = tert-butoxycarbonyl, Fm = 9-fluorenylmethyl), resp., is reported.
The synthesis was performed by a tandem combination of solid-phase
peptide synthesis and microwave-assisted
cyclization strategy.

REFERENCE COUNT: 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 34 OF 90 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2004:227419 CAPLUS

TITLE: Effect of microwave energy on solid phase peptide synthesis

AUTHOR(S): Collins, Jonathan M.; Hassman, C. Fred; King, Edward E.; Lambert, Joseph

CORPORATE SOURCE: Life Sciences Division, CEM Corporation, Matthews, NC, 28106, USA

SOURCE: Abstracts of Papers, 227th ACS National Meeting, Anaheim, CA, United States, March 28-April 1, 2004 (2004), ORGN-549. American Chemical Society: Washington, D. C.
CODEN: 69FGKM

DOCUMENT TYPE: Conference; Meeting Abstract

LANGUAGE: English

AB The application of microwave energy has proved to be a major enabling tool for many chemical applications requiring energy input. A new automated system for microwave assisted solid phase peptide synthesis has been developed that allows for complete cycle times of ten minutes as well as final peptide cleavage in ten minutes. A single mode cavity is used to allow for a high microwave power density and a uniform field distribution. The stability of activated amino acids under microwave irradiation was investigated using PyBOP and HBTU activation. The effect of microwave energy on conventional side reactions with SPPS such as racemization and aspartimide formation was investigated and found to compare very favorably with conventional methods. Also, exciting changes in coupling chemistries possible with microwave energy will be presented that help to further suppress racemization. The application of this new method will be shown on a variety of peptide sequences.

L10 ANSWER 35 OF 90 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2004:227418 CAPLUS

TITLE: Peptide modifications using microwave solid phase peptide synthesis

AUTHOR(S): Hassman, C. Fred; Collins, Jonathan M.

CORPORATE SOURCE: Life Sciences Division, CEM Corporation, Matthews, NC, 28106, USA

SOURCE: Abstracts of Papers, 227th ACS National Meeting, Anaheim, CA, United States, March 28-April 1, 2004 (2004), ORGN-548. American Chemical Society: Washington, D. C.
CODEN: 69FGKM

DOCUMENT TYPE: Conference; Meeting Abstract

LANGUAGE: English

AB Glycopeptides and phosphopeptides are essential tools for the discovery of eukaryotic cellular processes. The syntheses of these peptides are difficult due to their modified side chains. By using microwave directed solid phase peptide synthesis we have been able to decrease the reaction times and improve the overall purity of these difficult peptides.

L10 ANSWER 36 OF 90 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2004:658783 CAPLUS

TITLE: Microwave-enhanced solid-phase peptide synthesis

AUTHOR(S): Collins, Jonathan M.

CORPORATE SOURCE: CEM Corporation, Matthews, NC, 28106-0200, USA

SOURCE: Abstracts of Papers, 228th ACS National Meeting, Philadelphia, PA, United States, August 22-26, 2004 (2004), ORGN-518. American Chemical Society: Washington, D. C.
CODEN: 69FTZ8

DOCUMENT TYPE: Conference; Meeting Abstract

LANGUAGE: English

AB Microwave energy has proven to be a valuable tool for organic synthesis. Recently, microwave has been used for enhanced Fmoc solid phase peptide synthesis. With microwave energy, deprotection and coupling reactions can be performed in 3 and 4 min resp. This paper builds on previous work and demonstrates the successful application of microwave energy for longer 30-40 amino acid peptide sequences. Variation in deprotection and coupling chemistries will be presented and discussed.

L10 ANSWER 37 OF 90 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2004:658697 CAPLUS
TITLE: AEI: Microwave-assisted combinatorial chemistry: Highly efficient library synthesis on planar supports
AUTHOR(S): Bowman, Matthew D.; Jeske, Ryan C.; Blackwell, Helen E.
CORPORATE SOURCE: Department of Chemistry, University of Wisconsin-Madison, Madison, WI, 53706, USA
SOURCE: Abstracts of Papers, 228th ACS National Meeting, Philadelphia, PA, United States, August 22-26, 2004 (2004), ORGN-432. American Chemical Society: Washington, D. C.
CODEN: 69FTZ8
DOCUMENT TYPE: Conference; Meeting Abstract
LANGUAGE: English

AB We have developed a new platform for combinatorial synthesis that combines microwave-assisted organic reactions with the SPOT-synthesis technique. SPOT-synthesis is a conceptually simple, inexpensive, and highly parallel approach for the synthesis of peptides and small mols. on planar supports. We have found that the incorporation of microwave-assisted reactions into SPOT-synthesis can expand significantly the scope of this technique. We have developed a new support/linker system for SPOT-synthesis, established its compatibility with a range of microwave-assisted organic reactions, and extended this methodol. to another cellulose support type for larger scale reactions. This methodol. allows for sizable libraries to be prepared in one day. Our ongoing work in the design and evaluation of chalcone-derived libraries will be presented.

L10 ANSWER 38 OF 90 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on STN

ACCESSION NUMBER: 2006:67690 BIOSIS
DOCUMENT NUMBER: PREV200600067550
TITLE: Peptide modifications using microwave solid phase peptide synthesis.
AUTHOR(S): Hassman, C. Fred III [Reprint Author]; Collins, Jonathan M.
CORPORATE SOURCE: Fred.Hassman@cem.com
SOURCE: Abstracts of Papers American Chemical Society, (MAR 28 2004) Vol. 227, No. Part 2, pp. U207.
Meeting Info.: 227th National Meeting of the American-Chemical Society. Anaheim, CA, USA. March 28 -April 01, 2004. Amer Chem Soc.
CODEN: ACSRAL. ISSN: 0065-7727.
DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LANGUAGE: English
ENTRY DATE: Entered STN: 19 Jan 2006
Last Updated on STN: 19 Jan 2006

L10 ANSWER 39 OF 90 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2004:654953 CAPLUS
TITLE: Microwave-assisted combinatorial chemistry: Highly efficient library synthesis on planar supports
AUTHOR(S): Bowman, Matthew D.; Jeske, Ryan C.; Blackwell, Helen E.
CORPORATE SOURCE: Department of Chemistry, University of Wisconsin-Madison, Madison, WI, 53706, USA
SOURCE: Abstracts of Papers, 228th ACS National Meeting,

Philadelphia, PA, United States, August 22-26, 2004
(2004), AEI-071. American Chemical Society:
Washington, D. C.
CODEN: 69FTZ8

DOCUMENT TYPE: Conference; Meeting Abstract
LANGUAGE: English

AB We have developed a new platform for combinatorial synthesis that combines microwave-assisted organic reactions with the SPOT-synthesis technique. SPOT-synthesis is a conceptually simple, inexpensive, and highly parallel approach for the synthesis of peptides and small mols. on planar supports. We have found that the incorporation of microwave-assisted reactions into SPOT-synthesis can expand significantly the scope of this technique. We have developed a new support/linker system for SPOT-synthesis, established its compatibility with a range of microwave-assisted organic reactions, and extended this methodol. to another cellulose support type for larger scale reactions. This methodol. allows for sizable libraries to be prepared in one day. Our ongoing work in the design and evaluation of chalcone-derived libraries will be presented.

L10 ANSWER 40 OF 90 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2003:334523 CAPLUS

DOCUMENT NUMBER: 138:350828

TITLE: Directed microwave chemistry for accelerating chemical reactions

INVENTOR(S): Martin, Mark T.; Saul, Richard

PATENT ASSIGNEE(S): USA

SOURCE: U.S. Pat. Appl. Publ., 38 pp., Cont.-in-part of U.S. Ser. No. 968,517.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 4

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2003082633	A1	20030501	US 2002-234092	20020905
US 2002197645	A1	20021226	US 2001-968517	20011002
CA 2498005	A1	20040318	CA 2003-2498005	20030728
WO 2004023144	A1	20040318	WO 2003-US23365	20030728
W: AU, CA, JP				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR				
AU 2003254187	A1	20040329	AU 2003-254187	20030728
EP 1535071	A1	20050601	EP 2003-794447	20030728
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, SK				
JP 2006501050	T	20060112	JP 2004-534253	20030728
US 2004209303	A1	20041021	US 2004-842512	20040511
US 2005191708	A1	20050901	US 2005-105460	20050414

PRIORITY APPLN. INFO.:

US 2000-237192P	P	20001003
US 2001-968517	A2	20011002
US 2002-234092	A	20020905
WO 2003-US23365	W	20030728

AB The present invention concerns a novel means by which chemical preps. can be made. Reactions can be accelerated on special chips using microwave energy. The chips contain materials that efficiently absorb microwave energy causing chemical reaction rate increases. The invention is important in many small scale chemical transformations including those used in protein chemical and in combinatorial chemical. The undersides of Nunc MaxiSorp 96-well flat-bottom microtiter plates (strip well format) were hand-painted with a dielec. paste made from barium titanate powder and Elmer's Glue-All. Directed microwave heating accelerated avidin adsorption to the microtiter plate.

L10 ANSWER 41 OF 90 CAPLUS COPYRIGHT 2007 ACS on STN DUPLICATE 8

ACCESSION NUMBER: 2003:917219 CAPLUS

DOCUMENT NUMBER: 140:164209

TITLE: Rapid and efficient methodology to perform
macrocyclization reactions in solid-phase peptide
chemistry

AUTHOR(S): Grieco, Paolo; Campiglia, Pietro; Gomez-monterrey,
Isabel; Lama, Teresa; Novellino, Ettore

CORPORATE SOURCE: Dipartimento di Chimica Farmaceutica e Tossicologica,
University of Naples "Federico II", Naples, 80131,
Italy

SOURCE: Synlett (2003), (14), 2216-2218

CODEN: SYNLES; ISSN: 0936-5214

PUBLISHER: Georg Thieme Verlag

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 140:164209

AB A modification of classical solid phase peptide
synthesis methodol. under microwave irradiation was
investigated. To illustrate the synthetic method a number of Urotensin-II
analogs containing 2-fluoro-5-nitrobenzoic acid were prepared A clear
improvement in yield and reaction time using microwave heating in
comparison with conventional thermal heating were observed

REFERENCE COUNT: 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 42 OF 90 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2003:190685 CAPLUS

DOCUMENT NUMBER: 139:53283

TITLE: A new, rapid, general procedure for the synthesis of
organic molecules supported on methoxy-polyethylene
glycol (MeOPEG) under microwave irradiation conditions

AUTHOR(S): Porcheddu, Andrea; Ruda, Gian Filippo; Sega,
Alessandro; Taddei, Maurizio

CORPORATE SOURCE: Dipartimento di Chimica, Universita degli Studi di
Sassari, Sassari, 07100, Italy

SOURCE: European Journal of Organic Chemistry (2003), (5),
907-912

CODEN: EJOCFK; ISSN: 1434-193X

PUBLISHER: Wiley-VCH Verlag GmbH & Co. KGaA

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 139:53283

AB The procedure for the precipitation of mols. supported on MeOPEG (mol. mass
5000)

and their purification by fractional crystallization has been made easier by
use of
microwave irradiation A correct choice of the solvent employed for reaction
or purification (DME, THF, 1,2-dichlorobenzene, iPrOH, ethylene glycol) allows
working with 10 g of MeOPEG-OH, dissolved in 100 mL of solvent, under
microwave irradiation conditions and for crystallization to be induced just by
removal

of the reaction flask from the microwave oven. No addnl. precipitation
solvents

are needed, thus reducing the reaction times and the potential hazards of
working with large amts. of flammable solvents. The syntheses of several
peptides and of a tetrasubstituted pyridine are reported. Large amts. of
MeOPEG-OH may be used in this procedure, and so polyethylene glycol
assisted organic synthesis can be regarded as a valid preparative technique.

REFERENCE COUNT: 46 THERE ARE 46 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 43 OF 90 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on
STN

ACCESSION NUMBER: 2003:365494 BIOSIS

DOCUMENT NUMBER: PREV200300365494
TITLE: Novel method for enhanced solid phase peptide synthesis using microwave energy.
AUTHOR(S): Collins, J. M. [Reprint Author]; Collins, M. J.
CORPORATE SOURCE: CEM Corporation, Matthews, NC, 28106-0200, USA
SOURCE: Biopolymers, (2003) Vol. 71, No. 3, pp. 361. print.
Meeting Info.: 18th American Peptide Symposium on Peptide Revolution: Genomics, Proteomics and Therapeutics. Boston, MA, USA. July 19-23, 2003. American Peptide Society.
ISSN: 0006-3525 (ISSN print).
DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LANGUAGE: English
ENTRY DATE: Entered STN: 6 Aug 2003
Last Updated on STN: 6 Aug 2003

L10 ANSWER 44 OF 90 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on STN

ACCESSION NUMBER: 2003:365415 BIOSIS
DOCUMENT NUMBER: PREV200300365415
TITLE: Rapid microwave-assisted solid phase peptide synthesis.
AUTHOR(S): Erdelyi, M. [Reprint Author]; Gogoll, A. [Reprint Author]
CORPORATE SOURCE: Dept. of Organic Chemistry, Uppsala University, S-75 123, Box 599, Uppsala, Sweden
SOURCE: Biopolymers, (2003) Vol. 71, No. 3, pp. 340. print.
Meeting Info.: 18th American Peptide Symposium on Peptide Revolution: Genomics, Proteomics and Therapeutics. Boston, MA, USA. July 19-23, 2003. American Peptide Society.
ISSN: 0006-3525 (ISSN print).
DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LANGUAGE: English
ENTRY DATE: Entered STN: 6 Aug 2003
Last Updated on STN: 6 Aug 2003

L10 ANSWER 45 OF 90 CAPLUS COPYRIGHT 2007 ACS on STN DUPLICATE 9

ACCESSION NUMBER: 2002:674277 CAPLUS
DOCUMENT NUMBER: 138:14167
TITLE: Rapid microwave-assisted solid phase peptide synthesis
AUTHOR(S): Erdelyi, Mate; Gogoll, Adolf
CORPORATE SOURCE: Department of Organic Chemistry, Department of Medicinal Chemistry, Uppsala University, Uppsala, 751 21, Swed.
SOURCE: Synthesis (2002), (11), 1592-1596
CODEN: SYNTBF; ISSN: 0039-7881
PUBLISHER: Georg Thieme Verlag
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 138:14167

AB A microwave-assisted, rapid solid phase peptide synthesis procedure is presented. It has been applied to the coupling of sterically hindered Fmoc-protected amino acids yielding di- and tripeptides. Optimized conditions for a variety of coupling reagents are reported. Peptides were obtained rapidly (1.5-20 min) and without racemization.

REFERENCE COUNT: 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 46 OF 90 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on STN

ACCESSION NUMBER: 2003:175986 BIOSIS
DOCUMENT NUMBER: PREV200300175986
TITLE: Changes in synapsin I localization during synaptogenesis.
AUTHOR(S): Buchanan, J. [Reprint Author]; Micheva, K. [Reprint

CORPORATE SOURCE: Author]; Smith, S. J. [Reprint Author]
Molecular and Cellular Physiology, Stanford University
School of Medicine, Stanford, CA, USA
SOURCE: Molecular Biology of the Cell, (Nov 2002) Vol. 13, No.
Supplement, pp. 396a. print.
Meeting Info.: 42nd Annual Meeting of the American Society
for Cell Biology. San Francisco, CA, USA. December 14-18,
2002. American Society for Cell Biology.
ISSN: 1059-1524 (ISSN print).
DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LANGUAGE: English
ENTRY DATE: Entered STN: 9 Apr 2003
Last Updated on STN: 9 Apr 2003

L10 ANSWER 47 OF 90 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2002:305692 CAPLUS
DOCUMENT NUMBER: 136:373365
TITLE: Enhancing the microwave processing of ceramics by
avoiding hot spots and local melting in refractory
specimen enclosures
AUTHOR(S): Lee, Jong-Gi; Case, Eldon D.; Lee, Ki-Yong.
CORPORATE SOURCE: Michigan State University, East Lansing, MI, USA
SOURCE: Journal of Advanced Materials (2002), 34(2), 49-59
CODEN: JADMEK; ISSN: 1070-9789
PUBLISHER: Society for the Advancement of Material and Process
Engineering
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Microwave processing of ceramics often involves using a refractory
specimen enclosure (casket) that serves the dual role of (1) thermal
insulation and (2) a microwave susceptor. Interactions between the
microwave field and the refractory casket/specimen system can lead to
local hot spots and melting in the refractory caskets. Such interactions
can limit or inhibit microwave processing of ceramic materials. This
paper discusses methods to minimize the occurrence of casket melting and
hot spots, allowing one to successfully process ceramics despite such
effects. In addition, techniques are discussed which allow one to identify
the temperature at which temperature instabilities occur.

REFERENCE COUNT: 45 THERE ARE 45 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 48 OF 90 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2001:163414 CAPLUS
DOCUMENT NUMBER: 134:196994
TITLE: Heat distributor system for microwave sintering of
silicon-based compacts in nitrogen for silicon nitride
ceramics
INVENTOR(S): Tiegs, Terry N.; Kiggans, James O., Jr.
PATENT ASSIGNEE(S): UT Battelle, LLC, USA
SOURCE: U.S., 8 pp., Cont. of U.S. Ser. No. 46,876, abandoned.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	---	----	-----	-----
US 6197243	B1	20010306	US 1995-764902	19950323
PRIORITY APPLN. INFO.:			US 1993-46876	B1 19930416

AB A heat distribution system for microwave sintering, in which hot spots
forming in the ceramic compact are conducted and thermally diffused by a
heat distributor element, is described. The system is suitable for
microwave sintering of silicon-based compacts in nitrogen for silicon

nitride ceramics. The multi-layered heat distributor systems include a first inner layer of a high thermal conductivity heat distributor material that is substantially transparent to microwave energy (e.g. boron nitride), a middle insulating layer and an optional third insulating outer layer. A ceramic compact (e.g., Si and sintering aids) and the heat distributor are placed in an insulative container filled with insulative powder (e.g., Si₃N₄ powder), and the ceramic compact is heated in nitrogen by microwave energy to convert the ceramic compact to silicon nitride. Sintering aid may be .apprx.11 La₂O₃ or .apprx.9 Y₂O₃ with 3 weight% Al₂O₃. The heat distributor is made of boron nitride, Si₃N₄, AlN, BeN, SiO₂, Al₂O₃, or ZrO₂.

REFERENCE COUNT: 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 49 OF 90 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2001:759829 CAPLUS

DOCUMENT NUMBER: 136:56117

TITLE: Effects of microwave absorption material SiC on the results of partial oxidation of methane to syngas under microwave irradiation

AUTHOR(S): Xu, Yun-peng; Tian, Zhi-jian; Xu, Zhu-sheng; Lin, Li-wu

CORPORATE SOURCE: Dalian Inst. Chemical Physics, Chinese Acad. Sci., Dalian, 116023, Peop. Rep. China

SOURCE: Tianranqi Huagong (2001), 26(4), 1-4
CODEN: THTKEF; ISSN: 1001-9219

PUBLISHER: Tianranqi Huagong Bianjibu

DOCUMENT TYPE: Journal

LANGUAGE: Chinese

AB The effects of microwave absorption material SiC in the catalyst on the results of partial oxidation of methane to syngas under microwave irradiation was

investigated. It was found that the addition of SiC in the catalyst activity of partial oxidation of methane to syngas under microwave irradiation. From the comparison of reaction results between microwave irradiation and conventional elec. furnace heating, we can see that at the same conversion of methane, the bed temperature under microwave irradiation was much lower than that under conventional elec. furnace heating, and this was due to the microwave 'hot spot' effect.

L10 ANSWER 50 OF 90 MEDLINE on STN

ACCESSION NUMBER: 2002126664 MEDLINE

DOCUMENT NUMBER: PubMed ID: 11860833

TITLE: Report on epidemic hemorrhagic fever (EHF) surveillance in 1999.

AUTHOR: Luo C; Tang L; Chen H

CORPORATE SOURCE: Institute of Epidemiology and Microbiology, Chinese Academy of Preventive Medicine, Beijing 102206, China.

SOURCE: Zhonghua liu xing bing xue za zhi = Zhonghua liuxingbingxue zazhi, (2000 Dec) Vol. 21, No. 6, pp. 448-50.
Journal code: 8208604. ISSN: 0254-6450.

PUB. COUNTRY: China

DOCUMENT TYPE: (ENGLISH ABSTRACT)
Journal; Article; (JOURNAL ARTICLE)

LANGUAGE: Chinese

FILE SEGMENT: Priority Journals

ENTRY MONTH: 200411

ENTRY DATE: Entered STN: 26 Feb 2002

Last Updated on STN: 11 Dec 2002

Entered Medline: 2 Nov 2004

AB OBJECTIVE: To understand the epidemic trend of epidemic hemorrhagic fever (EHF) in 1999 and to develop programs for its control and prevention.

METHODS: Epidemiological, zoo-epidemiologic, serologic and viral diagnostics were used to analyse the information of monthly and annual reports from surveillance spots. RESULTS: Twelve thousand nine hundred

and thirty cases of EHF in all surveillance spots were reported with 135 cases of death in 1999. The morbidity and mortality were 5.37/100,000, and 1.04% respectively, which had a 1.47% decrease and 9.47% increase, comparing to that of 1998. The accordance of serological and clinical diagnosis was 67.25%, with rate of misreporting 1.28%. In animal surveillance, the density of mouse was 7.46% with predominant species *Apodemus agrarius*. In residential areas, the density of mouse was 6.21%, with predominant species *Rattus norvegicus*. For *Apodemus agrarius* in fields and *Rattus norvegicus* in residential areas, the indexes of HV carrier were 0.032 and 0.031 respectively in 1999. In spring and autumn, the indexes of HV carrier in *Rattus norvegicus* were apparently higher than that of *Apodemus agrarius* as the indexes of HV carrier in *Rattus norvegicus* were 0.028 and 0.036 comparing with 0.026 and 0.020 in *Apodemus agrarius*. CONCLUSION: It is suggested that more attention should be paid to the surveillance in low and medium-sized epidemic areas because northern China is dry with short rainy season while the epidemic situation in the serious epidemic areas had been under control to some degree.

L10 ANSWER 51 OF 90 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on STN

ACCESSION NUMBER: 1999:490381 BIOSIS
DOCUMENT NUMBER: PREV199900490381
TITLE: Pruning artificial neural networks: An example using land cover classification of multi-sensor images.
AUTHOR(S): Kavzoglu, T. [Reprint author]; Mather, P. M.
CORPORATE SOURCE: Gebze Institute of Technology, Fabrikalar Yolu, No. 101, Cayirova Campus, 41400, Gebze/Kocaeli, Turkey
SOURCE: International Journal of Remote Sensing, (Sept. 20, 1999) Vol. 20, No. 14, pp. 2787-2803. print.
ISSN: 0143-1161.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 16 Nov 1999
Last Updated on STN: 16 Nov 1999

AB The use of three techniques for pruning artificial neural networks (magnitude-based pruning, optimum brain damage and optimal brain surgeon) is investigated, using microwave SAR and optical SPOT data to classify land cover in a test area located in eastern England. Results show that it is possible to reduce network size significantly without compromising overall classification accuracy; indeed, accuracy may rise as the number of links decreases. However, individual class accuracies and the spatial distribution of the pixels forming the individual classes may change significantly. If the network is pruned too severely some classes may be eliminated altogether. In terms of maintaining overall classification accuracy the optimal brain surgeon algorithm gave the best results, and magnitude-based pruning also gave good results despite its simplicity. The optimum brain damage algorithm performed least well of the three methods tested.

L10 ANSWER 52 OF 90 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1999:333780 CAPLUS
DOCUMENT NUMBER: 131:10020
TITLE: Apparent equilibrium shifts and hot-spot formation for catalytic reactions induced by microwave dielectric heating
AUTHOR(S): Zhang, Xunli; Hayward, David O.; Mingos, D. Michael P.
CORPORATE SOURCE: Department of Chemistry, Imperial College of Science, Technology and Medicine, South Kensington, London, SW7 2AY, UK
SOURCE: Chemical Communications (Cambridge) (1999), (11), 975-976
CODEN: CHCOFS; ISSN: 1359-7345
PUBLISHER: Royal Society of Chemistry
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Microwave dielec. heating of the gas phase decomposition of H₂S catalyzed by metal sulfides on a γ -Al₂O₃ support results in significant apparent shifts in the equilibrium constant, which have been attributed to the development of hot-spots in the catalytic beds; X-ray diffraction and electron microscopy measurements have indicated the formation of hot-spots with dimensions of 90-1000 μ m and which involve not only the active phase, but also the support.

REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 53 OF 90 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on STN DUPLICATE 10

ACCESSION NUMBER: 1999:213478 BIOSIS
DOCUMENT NUMBER: PREV199900213478
TITLE: Survival of Anisakis simplex in microwave-processed arrowtooth flounder (*Atheresthes stomias*).
AUTHOR(S): Adams, Ann M. [Reprint author]; Miller, Kathleen S.; Wekell, Marleen M.; Dong, Faye M.
CORPORATE SOURCE: Seafood Products Research Center, U.S. Food and Drug Administration, 22201 23rd Drive S.E., Bothell, WA, 98041-3012, USA
SOURCE: Journal of Food Protection, (April, 1999) Vol. 62, No. 4, pp. 403-409. print.
CODEN: JFPRDR. ISSN: 0362-028X.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 26 May 1999
Last Updated on STN: 26 May 1999

AB The purpose of this study was to define the relationship between survival and temperature of nematodes of the species *Anisakis simplex* in microwave-processed arrowtooth flounder (*Atheresthes stomias*). Ten fillets (each 126 to 467 g, 0.5 to 1.75 cm thick), with an average of five larvae of *Anisakis simplex* per fillet, were processed to target temperatures on high (100%) power using a commercial 700-W microwave oven. Fillets were neither covered nor rotated and had a temperature probe inserted to two-thirds depth into the thickest portion. After the fillet was digested using a 1% pepsin solution, the viability of nematodes was determined by viewing them under a dissecting microscope. Survival rates were 31% at 140degreeF (60degreeC), 11% at 150degreeF (65degreeC), 2% at 160degreeF (71degreeC), 3% at 165degreeF (74degreeC), and 0% at 170degreeF (77degreeC). Microwave processing of standardized fillet "sandwiches," 14 cm long, 4.5 cm wide, and approximately 1.75 cm high, each of which was preinoculated with 10 live nematodes, resulted in no survival at either 160degreeF or 170degreeF. Using ultraviolet light to detect both viable and nonviable nematodes in fillet sandwiches as an alternative method to pepsin digestion resulted in survival rates of 1% at 140degreeF (60degreeC), 3% at 145degreeF (63degreeC), and 0% at 150degreeF (65degreeC). Smaller fillet sandwiches, which most likely had fewer cold spots during microwave processing, required 150degreeF (65degreeC), whereas larger whole fillets required 170degreeF (77degreeC) to kill larvae of *Anisakis simplex*. The parasites were most likely inactivated by a thermal mechanism of microwave treatment. Damage to the nematodes was often evident from ruptured cuticles that were no longer resistant to digestive enzymes. The high hydrostatic pressure and low chloride content of the pseudocoelomic fluid probably contributed greatly to the damage incurred by the larvae.

L10 ANSWER 54 OF 90 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1999:47285 CAPLUS
DOCUMENT NUMBER: 130:127218
TITLE: Catalytic activity of Co/La₂O₃ for partial oxidation of methane to syngas in microwave field
AUTHOR(S): Bi, Xianjun; Duan, Aihong; Xie, Xiaoguang; Wang, Zhen; Hong, Pinjie; Dai, Shushan

CORPORATE SOURCE: Department Chemistry, Yunnan Normal University,
Kunming, 650092, Peop. Rep. China
SOURCE: Fenzi Cuihua (1998), 12(6), 463-466
CODEN: FECUEN; ISSN: 1001-3555
PUBLISHER: Kexue Chubanshe
DOCUMENT TYPE: Journal
LANGUAGE: Chinese
AB The temperature rising behavior of Co/La2O3 catalysts with different Co contents and the activity of 10% Co/La2O3 catalyst for CH4 partial oxidation to syngas under microwave irradiation have been studied. The higher the content of Co in Co/La2O3, the higher temperature can be reached under microwave irradiation. Compared with the conventional heating, the temperature of the catalytic bed is much lower and higher selectivity to CO can be obtained with microwave irradiation, which could be attributed to the "microwave hot spot" effect.

L10 ANSWER 55 OF 90 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1997:750356 CAPLUS
DOCUMENT NUMBER: 128:54334
TITLE: Initial results from the multi-megawatt 110 GHz ECH system for the DII-D tokamak
AUTHOR(S): Callis, R. W.; Lohr, J.; O'Neill, R. C.; Ponce, D.; Prater, R.; Austin, M. E.; Luce, T. C.
CORPORATE SOURCE: General Atomics, San Diego, CA, 92186, USA
SOURCE: AIP Conference Proceedings (1997), 403(Radio Frequency Power in Plasmas), 191-194
CODEN: APCPCS; ISSN: 0094-243X
PUBLISHER: AIP Press
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The 1st of 3 MW-level 110 GHz gyrotrons was operated into the DIII-D tokamak in late 1996. Two addnl. units will be commissioned during 1997. Each gyrotron is connected to the tokamak by a low loss, windowless, evacuated transmission line using circular corrugated waveguide carrying the HE11 mode. The microwave beam spot is well focused with a spot size of .apprx.6 cm and can be steered poloidally from the center to the outer edge of the plasma. The initial operation with .apprx.0.5 MW delivered to a low d. plasma for 0.5 s showed good central electron heating, with peak temperature >10 keV. The injection was 19° off perpendicular for current drive.
REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 56 OF 90 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1997:508040 CAPLUS
DOCUMENT NUMBER: 127:190992
TITLE: Studies of microwave effects on chemical reactions
AUTHOR(S): Chen, Shui-Tein; Tseng, Ping-Hui; Yu, Hui-Ming; Wu, Chi-Yue; Hsiao, Kwo-Feng; Wu, Shih-Hsiung; Wang, Kung-Tsung
CORPORATE SOURCE: Institute of Biological Chemistry, Academia Sinica, Taipei, 11529, Taiwan
SOURCE: Journal of the Chinese Chemical Society (Taipei) (1997), 44(3), 169-182
CODEN: JCCTAC; ISSN: 0009-4536
PUBLISHER: Chinese Chemical Society
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
AB A review with 52 refs. on applications of microwave irradiation. The authors have used this unique technol. to develop: (1) a method to control the cleavage sites of peptide bonds, especially those bonds connected to aspartic acid residues in native peptides and proteins, (2) a method to increase coupling efficiency in solid-phase peptide synthesis using a common microwave oven, (3) a novel procedure that

increases the rate of alcalase-catalyzed reactions using microwave irradiation in peptide-bond formation with proline as a nucleophile and selective benzoylation of a pyranoside derivative, (4) a procedure to solubilize and hydrolyze retrograded starch, and (5) a novel procedure to enhance the rate of saponification in a serum sample for very long chain fatty acid anal.

REFERENCE COUNT: 45 THERE ARE 45 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 57 OF 90 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1997:91693 CAPLUS

DOCUMENT NUMBER: 126:132866

TITLE: Microwave effects on oxidative coupling of methane over solid oxygen ion conductors

AUTHOR(S): Chen, Chang-Lin; Hong, Pin-Jie; Dai, Shu-Shan; Zhang, Cheng-Cong; Yang, Xiao-Yun

CORPORATE SOURCE: Dep. Chem., Yunnan Univ., Kunming, 650091, Peop. Rep. China

SOURCE: Gaodeng Xuexiao Huaxue Xuebao (1997), 18(1), 99-102
CODEN: KTHPDM; ISSN: 0251-0790

PUBLISHER: Gaodeng Jiaoyu Chubanshe

DOCUMENT TYPE: Journal

LANGUAGE: Chinese

AB Oxidative coupling of methane over δ -Bi₂O₃-phase solid oxygen ion conductors irradiated by microwave was studied. Compared with the conventional heating method, the use of microwave irradiation had the following beneficial effects: (1) at the same methane conversion level, the temperature of catalyst bed is much lower with the microwave irradiation

than with the conventional heating method due to "microwave hot spot" effect; (2) the C₂ selectivity obtained with microwave irradiation is much higher than with conventional heating especially in the lower

temperature range. This difference might arise from the reduction of oxidation products (ethane, ethylene) in the gas phase under microwave irradiation

L10 ANSWER 58 OF 90 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on STN

ACCESSION NUMBER: 1996:410640 BIOSIS

DOCUMENT NUMBER: PREV199699132996

TITLE: Evaluation of six techniques for control of the western drywood termite (Isoptera: Kalotermitidae) in structures.

AUTHOR(S): Lewis, Vernard R. [Reprint author]; Haverty, Michael I.

CORPORATE SOURCE: Div. Insect. Biol., Calif. Environ. Sci. Policy Manage., 201 Wellman Hall, Univ. Calif., Berkeley, CA 94720, USA

SOURCE: Journal of Economic Entomology, (1996) Vol. 89, No. 4, pp. 922-934.

CODEN: JEENAI. ISSN: 0022-0493.

DOCUMENT TYPE: Article

LANGUAGE: English

ENTRY DATE: Entered STN: 10 Sep 1996

Last Updated on STN: 10 Sep 1996

AB Chemical and nonchemical methods for control of western drywood termites, *Incisitermes minor* (Hagen), were evaluated under conditions that simulated infestations in structures. The efficacy of excessive heat or cold, electrocution, microwaves, and 2 fumigants was evaluated. Termite mortality in artificially infested boards was 100% at 3 d after treatment for both fumigant gases. Heating the whole-structure or spot-applications using microwaves resulted in 96 and 90% mortality, respectively, 3 d after treatment. Mortality levels 4 wk after treatment increased to 98% for heat and 92% for microwaves. Spot-applications of liquid nitrogen at 381.8 kJ/m³ achieved 100% mortality 3 d after treatment. However, for 122.7 and 57.3 kJ/m³, mortality levels 4 wk after treatment were 99 and 87%, respectively. Mortality by spot-applications of electricity was 44% 3 d after treatment in the 1st test. Four weeks after treatment drywood termite mortality increased to

81%. In a 2nd electrocution test, using spot-application techniques infrequently used in structures, mortality levels increased to 93% at 3 d and 99% at 4 wk after treatment. The distribution of termite survivors within the test building and test boards varied for some treatment techniques. For naturally infested boards, both fumigants exceeded 99% mortality. Use of heat and microwaves resulted in 100 and 99% mortality levels, respectively, 4 wk after treatment. Applications of liquid nitrogen resulted in mortality 99.8% at 381.8 and 122.7 kg/m³; however, mortality for 57.3 kg/m³ was significantly lower (74%). Mortality levels from electrocution were 89 and 95% 4 wk after treatment, respectively, in the 2 tests. Damage to test boards and the test building did occur. Six test boards were scorched during microwave treatment, 80% of test boards were damaged during electrocution, and visible signs of damage to the test building were noted for whole-structure heating. This study provides information for evaluation of the relative efficacy of fumigation and nonchemical alternatives for the control of drywood termite infestations in structures.

L10 ANSWER 59 OF 90 CAPLUS COPYRIGHT 2007 ACS on STN DUPLICATE 11

ACCESSION NUMBER: 1996:272176 CAPLUS
 DOCUMENT NUMBER: 125:4714
 TITLE: Analyses of reducing sugars on a thin-layer chromatographic plate with modified Somogyi and Nelson reagents, and with copper bicinchoninate
 AUTHOR(S): Kim, Yeon-Kye; Sakano, Yoshiyuki
 CORPORATE SOURCE: Dep. Appl. Biol. Sci., Fac. Agric., Tokyo Univ. Agric. Technol., Tokyo, 183, Japan
 SOURCE: Bioscience, Biotechnology, and Biochemistry (1996), 60(4), 594-7
 CODEN: BBBIEJ; ISSN: 0916-8451
 PUBLISHER: Japan Society for Bioscience, Biotechnology, and Agrochemistry
 DOCUMENT TYPE: Journal
 LANGUAGE: English

AB Two novel methods to detect reducing sugar on a TLC plate, using aqueous coloring reagents and a com. microwave oven, were developed. After spraying the modified Somogyi reagent on the plate, irrigating the reducing sugars, and then heating in a com. microwave oven for a few minutes, the modified Nelson reagent was sprayed on the plates. Reducing sugars were only apparent as blue spots. On the other hand, after spraying the bicinchoninate reagent on the plates and then heating in the microwave oven, the sugar spots became reddish-violet. These 2 new methods enabled 0.1 µg of glucose per spot to be detected on a TLC plate. Non-reducing sugars (sucrose, trehalose, Me α-D-glucoside, and transfer products containing non-reducing ends) were not detectable by these methods.

L10 ANSWER 60 OF 90 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1996:677847 CAPLUS
 DOCUMENT NUMBER: 125:304173
 TITLE: 3-D temperature distributions produced by a microwave spot heating applicator
 AUTHOR(S): Roos, R. M.; Thomas, J. R., Jr.
 CORPORATE SOURCE: Mechanical Eng. Dep., Virginia Polytechnic Inst. State Univ., Blacksburg, VA, 24061, USA
 SOURCE: Materials Research Society Symposium Proceedings (1996), 430 (Microwave Processing of Materials V), 345-350
 CODEN: MRSPDH; ISSN: 0272-9172
 PUBLISHER: Materials Research Society
 DOCUMENT TYPE: Journal
 LANGUAGE: English

AB Numerical simulations were used to investigate the effectiveness for materials processing of recently announced microwave spot-heating applicators. These devices can produce heating in

depth over a region a centimeter or two in diameter Computed 3-D time-dependent temperature distributions for both stationary and moving samples suggest that such applicators could be useful for joining of ceramics, such as alumina. Moving the beam relative to the workpiece at an appropriate rate avoids thermal runaway.

L10 ANSWER 61 OF 90 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on STN

ACCESSION NUMBER: 1996:267031 BIOSIS
DOCUMENT NUMBER: PREV199698823160
TITLE: Microwave application in vacuum drying of fruits.
AUTHOR(S): Drouzas, A. E.; Schubert, H. [Reprint author]
CORPORATE SOURCE: Inst. Food Process Eng., Univ. Karlsruhe, Karlsruhe, Germany
SOURCE: Journal of Food Engineering, (1996) Vol. 28, No. 2, pp. 203-209.
CODEN: JFOEDH. ISSN: 0260-8774.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 10 Jun 1996
Last Updated on STN: 10 Jun 1996

AB Microwave vacuum drying of banana slices was investigated experimentally. This type of drying procedure is preferable to conventional drying techniques in order to avoid product degradation due to high temperatures encountered in convective drying. The drying process was examined by introducing pulse-generated microwave power in banana samples. The material temperature was monitored. Temperature peaks in the last stages of drying indicated that drying could be favoured if temperature was maintained below a maximum level, so that the final product should not be burned by hot spots during microwave drying. This procedure produced dehydrated products of excellent quality as examined by taste, aroma, smell and rehydration tests.

L10 ANSWER 62 OF 90 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1996:677824 CAPLUS
DOCUMENT NUMBER: 125:336719
TITLE: Cavity effects and hot spot formulation in microwave heated ceramic fibers
AUTHOR(S): Kriegsmann, G. A.
CORPORATE SOURCE: Dep. Mathematics, New Jersey Inst. Technol., Newark, NJ, 07102, USA
SOURCE: Materials Research Society Symposium Proceedings (1996), 430(Microwave Processing of Materials V), 181-186
CODEN: MRSPDH; ISSN: 0272-9172
PUBLISHER: Materials Research Society
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Recently the heating of a thin ceramic cylinder in a single mode applicator was modeled and analyzed assuming a small Biot number and a known uniform elec. field through out the sample. The resulting simplified math. equations explained the mechanism for the generation and growth of localized regions of high temperature The results predicted that a hot-spot, once formed, will grow until it consumes the entire sample. Most exptl. observations show that the hot-spot stabilizes and moves no further. A new model is proposed which incorporates the effect of the cavity and the nonuniform character of the elec. field along the axis of the sample. The resulting simplified math. equations indicate that these effects stabilize the growth of hot-spots.

L10 ANSWER 63 OF 90 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1996:168853 CAPLUS
DOCUMENT NUMBER: 124:209754
TITLE: Open coaxial microwave spot joining applicator

AUTHOR(S): Tinga, W.R.; Xu, J.D.; Vermeulen, F.E.
CORPORATE SOURCE: University of Alberta, Edmonton, AB, Can.
SOURCE: Ceramic Transactions (1995), 59, 347-55
CODEN: CETREW; ISSN: 1042-1122
DOCUMENT TYPE: Journal
LANGUAGE: English

AB To allow intense heating on a large surface or along a joint region requires an open-ended applicator. Currently used closed resonant structures greatly constrain the practical application of microwave joining. Initial results of an open coaxial structure are presented which can be moved along a surface to raise its temperature in a very narrow region to over 1000°C. Microwave leakage is kept very low by the use of a dual frequency choke design. Dual frequency operation is possible with this approach since the applicator length is tunable also. Results obtained show promise that this design approach could be used for microwave joining of ceramics (Plexiglas) as well for many other applications. This design was modeled by a modified finite element technique giving insight into the effect of various design variables.

L10 ANSWER 64 OF 90 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1995:225178 CAPLUS
DOCUMENT NUMBER: 122:62117
TITLE: Growth and stabilization of hot spots in microwave heated ceramic fibers
AUTHOR(S): Kriegsmann, Gregory A.
CORPORATE SOURCE: Dep. Mathematics, New Jersey Inst. Technol., Newark, NJ, 07102, USA
SOURCE: Materials Research Society Symposium Proceedings (1994), 347(Microwave Processing of Materials IV), 473-8
CODEN: MRSPDH; ISSN: 0272-9172
PUBLISHER: Materials Research Society
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Recently the heating of a thin ceramic cylinder in a single mode applicator was modeled and analyzed assuming a small Biot number and a known uniform elec. field through out the sample. The resulting simplified math. equations explained the mechanism for the generation and growth of localized regions of high temperature. The results predicted that a hot-spot, once formed, will grow until it consumes the entire sample. Although this phenomenon is seen in some expts., others show that the hot-spot stabilizes and moves no further. A new model is proposed which incorporates the dependence of the thermal conductivity and the effective heat transfer coefficient upon temperature, and the nonuniformity of the elec. field along the fiber axis. The resulting simplified math. equations indicate that these effects may stabilize the growth of hot-spots.

L10 ANSWER 65 OF 90 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1994:168166 CAPLUS
DOCUMENT NUMBER: 120:168166
TITLE: Microwave interferometry of shock waves. II. Reacting porous media
AUTHOR(S): Glancy, Brian C.; Sandusky, Harold W.; Krall, Albert D.
CORPORATE SOURCE: Nav. Surf. Warf. Cent., Silver Spring, MD, 20903-5640, USA
SOURCE: Journal of Applied Physics (1993), 74(10), 6328-34
CODEN: JAPIAU; ISSN: 0021-8979
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Shocked porous ball powders were investigated by microwave interferometry in order to exam. the reactions and the development of the reaction zone in ignition of energetic powders (e.g., gun propellants). Equations

developed for interferometric measurements on inert materials apply for energetic materials until reaction at the shock front begins. As the reaction begins, the microwave interferometer output exhibited characteristic changes in both the absorption and reflection of the microwave signal, which can be related to hot spot development at the shock front. The hot spots in a reacting bed were exptl. approximated to a first order by including metallic particles in unreacting beds and measuring their effects on the propagation of microwaves. With the aid of dielec. measurements of the metalized beds, hot spot concns. as a function of time were predicted from the microwave interferometry output of the reacting beds.

L10 ANSWER 66 OF 90 EMBASE COPYRIGHT (c) 2007 Elsevier B.V. All rights reserved on STN

ACCESSION NUMBER: 93157666 EMBASE
DOCUMENT NUMBER: 1993157666
TITLE: The problem of hot spots in microwave equipment used for preparatory techniques - Theory and practice.
AUTHOR: Kok L.P.; Boon M.E.; Smid H.M.
CORPORATE SOURCE: Leiden Cytology/Pathology Laboratory, P.O. Box 16084,2301 GB Leiden, Netherlands
SOURCE: Scanning, (1993) Vol. 15, No. 2, pp. 100-109. .
ISSN: 0161-0457 CODEN: SCNNDF
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 027 Biophysics, Bioengineering and Medical Instrumentation
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 27 Jun 1993
Last Updated on STN: 27 Jun 1993

AB Electron microscopists who wants to use a microwave (MW) oven to stimulate preparatory processes are sooner or later confronted with the problem of hot spots. It soon becomes clear to the user of any MW oven that the energy distribution-thus the speed of absorbing energy, and hence warming up-varies topographically. The unaware can observe variations in results when the principles of topographic order are not followed meticulously. To understand the hot-spot phenomenon a certain theoretical knowledge is needed, as presented in this paper. In the 10 years that we have used MW ovens for our preparatory techniques we have learned how to solve the problem of hot spots. Thermographic paint can be applied to record energy distribution. In our studies, we have used a fiberoptic thermometer to follow precisely in time the temperature in the MW-exposed media, and these observations have provided us with the needed insight to obtain reproducible results. We argue that only when temperature curves are given by the authors can their recipes be used successfully in other laboratories.

L10 ANSWER 67 OF 90 CAPLUS COPYRIGHT 2007 ACS on STN DUPLICATE 12

ACCESSION NUMBER: 1992:572007 CAPLUS
DOCUMENT NUMBER: 117:172007
TITLE: Enhanced coupling efficiency in solid-phase peptide synthesis by microwave irradiation
AUTHOR(S): Yu, Hui Ming; Chen, Shui Tein; Wang, Kung Tsung
CORPORATE SOURCE: Inst. Biol. Chem., Acad. Sin., Taipei, 10098, Taiwan
SOURCE: Journal of Organic Chemistry (1992), 57(18), 4781-4
CODEN: JOCEAH; ISSN: 0022-3263
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Procedures have been developed for increasing coupling efficiency in solid-phase peptide synthesis by microwave irradiation using a kitchen microwave oven. A rate increase of at least 2-4 fold was observed For side-chain hindered amino acids or for peptides containing

difficult-coupling sequences, the peptide bond formation can be finished within 4-6 min. Under the same irradiation conditions, the microwave induced rate enhancement is more significant using Fmoc-peptide fragments than using amino acid derivs. in peptide synthesis. No detectable racemization reaction was observed

L10 ANSWER 68 OF 90 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1993:105918 CAPLUS
DOCUMENT NUMBER: 118:105918
TITLE: Microwave interferometric hot spot
density measurements in energetic materials
AUTHOR(S): Glancy, Brian C.; Sandusky, Harold W.; Krall, Albert
D.
CORPORATE SOURCE: White Oak, Nav. Surf. Warf. Cent., Silver Spring, MD,
20903-5000, USA
SOURCE: Shock Compression Condens. Matter--1991, Proc. Am.
Phys. Soc. Top. Conf., 7th (1992), Meeting Date 1991,
663-6. Editor(s): Schmidt, Stephen C. North-Holland:
Amsterdam, Neth.
CODEN: 58RMA4
DOCUMENT TYPE: Conference
LANGUAGE: English

AB Frequency anal. of microwave interferometric signals from impacted and shocked energetic materials was used to measure detonation front and particle motion. Such interferometric measurements from expts. on tetryl and HMX (high explosives) were reported and contrasted with data with those using TS 3659 (cellulose nitrate-nitroglycerin) propellant. Some early reaction near the piston face in HMX was observed that was not evident in the propellant expts. Also, the reflected microwave signal from the HMX detonation front was unlike that seen in tetryl or the propellant, possibly indicating a difference in its mechanism of detonation.

L10 ANSWER 69 OF 90 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on STN

ACCESSION NUMBER: 1992:247200 BIOSIS
DOCUMENT NUMBER: PREV199242117500; BR42:117500
TITLE: ENHANCEMENT OF COUPLING REACTION IN PEPTIDE
SYNTHESIS BY MICROWAVE IRRADIATION.
AUTHOR(S): WANG K-T [Reprint author]; CHEN S-T; CHIOU S-H
CORPORATE SOURCE: INST BIOCHEM SCI, NATL TAIWAN UNIV, TAIWAN
SOURCE: (1991) pp. 241-247. VILAFRANCA, J. J. (ED.). TECHNIQUES IN
PROTEIN CHEMISTRY, II; FOURTH ANNUAL SYMPOSIUM OF THE
PROTEIN SOCIETY, SAN DIEGO, CALIFORNIA, USA, AUGUST 11-15,
1990. XVII+579P. ACADEMIC PRESS, INC.: SAN DIEGO,
CALIFORNIA, USA; LONDON, ENGLAND, UK. ILLUS.
ISBN: 0-12-721957-9(PAPER), 0-12-721958-7(CLOTH).
DOCUMENT TYPE: Book
Conference; (Meeting)
FILE SEGMENT: BR
LANGUAGE: ENGLISH
ENTRY DATE: Entered STN: 14 May 1992
Last Updated on STN: 14 May 1992 :

L10 ANSWER 70 OF 90 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1991:680515 CAPLUS
DOCUMENT NUMBER: 115:280515
TITLE: Enhancement of coupling reaction in peptide
synthesis by microwave irradiation
AUTHOR(S): Wang, Kung Tsung; Chen, Shui Tein; Chiou, Shyh Horng
CORPORATE SOURCE: Inst. Biochem. Sci., Natl. Taiwan Univ., Taipei,
Taiwan
SOURCE: Tech. Protein Chem. 2, [Pap. Annu. Symp. Protein
Soc.], 4th (1991), Meeting Date 1990, 241-7.
Editor(s): Villafranca, Joseph J. Academic: San
Diego, Calif.

CODEN: 57IHA5

DOCUMENT TYPE: Conference

LANGUAGE: English

AB A symposium report on the enhancement of the peptide coupling reaction by microwave irradiation. The microwave enhancement was applied to the liquid phase

synthesis of Moz-Val-Val-OMe [Moz = [(4-methoxyphenyl)methoxy]carbonyl] and the solid-phase synthesis of Tyr-Ile and Leu-Ala-Gly-Val.

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ACCESSION NUMBER: 90088547 EMBASE

DOCUMENT NUMBER: 1990088547

TITLE: Microwave: Practical cost-effective method for sterilizing urinary catheters in the home.

AUTHOR: Douglas C.; Burke B.; Kessler D.L.; Cicmanec J.F.; Bracken R.B.

CORPORATE SOURCE: 231 Bethesda Avenue, Cincinnati, OH 45267-0589, United States

SOURCE: Urology, (1990) Vol. 35, No. 3, pp. 219-222. .

ISSN: 0090-4295 CODEN: URGYAZ

COUNTRY: United States

DOCUMENT TYPE: Journal; Article

FILE SEGMENT: 004 Microbiology
027 Biophysics, Bioengineering and Medical Instrumentation
028 Urology and Nephrology
036 Health Policy, Economics and Management

LANGUAGE: English

SUMMARY LANGUAGE: English

ENTRY DATE: Entered STN: 13 Dec 1991

Last Updated on STN: 13 Dec 1991

AB We used a standard microwave oven to sterilize red rubber catheters used for intermittent self-catheterization. Catheters were incubated for sixty minutes in a suspension of microorganisms isolated from the urine of patients with urinary tract infections. For each trial, 6 catheters were removed from their respective suspensions, placed in separate plastic freezer bags, distributed evenly in a microwave oven (avoiding cold spots), and microwaved simultaneously for twelve minutes. A control catheter was not microwaved. Two strains of each microorganism were tested. The urinary isolates were Escherichia coli, Klebsiella sp., Proteus sp., Enterobacter sp., Pseudomonas sp., Streptococcus sp., Staphylococcus sp., and Candida sp. In each experiment, all 6 catheters were sterilized. Repeat sterilization in the microwave oven did not affect the integrity of the catheters or the plastic bags. A water heat sink of constant volume was employed. A home microwave oven may be used as a method to sterilize red rubber catheters for reuse with a recommended time of twelve minutes at full power. This technique makes aseptic intermittent self-catheterization a practical possibility.

L10 ANSWER 72 OF 90 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1989:222024 CAPLUS

DOCUMENT NUMBER: 110:222024

TITLE: Comparison of the microwave and soft x-ray emission above a sunspot

AUTHOR(S): Siarkowski, M.; Sylwester, J.; Jakimiec, J.; Bentley, R. D.

CORPORATE SOURCE: Sp. Res. Cent., Pol. Acad. Sci., Wroclaw, Pol.

SOURCE: Solar Physics (1989), 119(1), 65-75

CODEN: SLPHAX; ISSN: 0038-0938

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The Westerbork Synthesis Radio Telescope 6 cm radio observations of the active region HL 16864 large spot were compared with x-ray data obtained from the Flat Crystal Spectrometer (FCS) onboard the Solar Maximum Mission

satellite on May 25, 1980. The x-ray data confirm the presence of a temperature depression above the spot umbra in agreement with suggestions obtained from radio data anal. Differences in the spatial distribution of both kinds of emission observed in the corona above this spot are attributed mainly to the strong resonant character of the cyclotron radio radiation. Some differences are also caused by both the relatively low efficiency and the low spatial resolution of the FCS. Deconvolution of x-ray images allows seeing the new structures and enhances the mutual correlation between x-ray and radio pictures.

L10 ANSWER 73 OF 90 CAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 1989:40157 CAPLUS
 DOCUMENT NUMBER: 110:40157
 TITLE: Tin- or tin alloy-deposited plastic films for food packages
 INVENTOR(S): Kuwabara, Nobuo; Tanaka, Keisuke
 PATENT ASSIGNEE(S): Reiko and Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 63157858	A	19880630	JP 1986-306120	19861222
JP 06006783	B	19940126		

PRIORITY APPLN. INFO.: JP 1986-306120 19861222
 AB The title films, useful for microwave oven-cookable packages, are prepared by vacuum depositing Sn, Sn-Al alloy, or Sn-Si alloy in 200 Å-1 µm spots with a 100-5000 Å distance between the spots. A 30-µm polypropylene film was vacuum deposited with Sn to give a film with light transmission 18.5%, spot size 1000 Å, distance between spots 100 Å, surface resistivity >10¹³ Ω/cm², and cookable in microwave ovens, vs. 65, continuous, 0, 103, and uncookable, resp., for a film deposited with Al (100 Å thickness).

L10 ANSWER 74 OF 90 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on STN
 ACCESSION NUMBER: 1989:110037 BIOSIS
 DOCUMENT NUMBER: PREV198936055453; BR36:55453
 TITLE: DETERMINATION OF AMINO ACIDS ON MERRIFIELD RESIN BY MICROWAVE HYDROLYSIS.
 AUTHOR(S): YU H-M [Reprint author]; CHEN S-T; CHIOU S-H; WANG K-T
 CORPORATE SOURCE: INST BIOCHEM SCI, NATL TAIWAN UNIV, ACADEMIA SINICA, PO BOX 23-206, TAIPEI
 SOURCE: Journal of Chromatography, (1988) Vol. 456, No. 2, pp. 357-362.
 DOCUMENT TYPE: Article
 FILE SEGMENT: BR
 LANGUAGE: ENGLISH
 ENTRY DATE: Entered STN: 21 Feb 1989
 Last Updated on STN: 21 Feb 1989

L10 ANSWER 75 OF 90 CAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 1987:146646 CAPLUS
 DOCUMENT NUMBER: 106:146646
 TITLE: Hot spots in the microwave sky
 AUTHOR(S): Vittorio, Nicola; Juszkievicz, Roman
 CORPORATE SOURCE: Ist. Astron., Univ. Roma, Rome, Italy
 SOURCE: Astrophysical Journal (1987), 314(2, Pt. 2), L29-L32
 CODEN: ASJOAB; ISSN: 0004-637X
 DOCUMENT TYPE: Journal

LANGUAGE: English
AB The assumption that the cosmic background fluctuations can be approximated as a random Gaussian field implies specific predictions for the radiation temperature pattern. Using this assumption, the abundances and angular sizes of regions of various levels of brightness expected to appear in the sky were calculated. Different observational strategies were assessed in the context of the results. Calcns. for both large-angle and small-angle anisotropy generated by scale-invariant fluctuations in a flat universe are presented. Simple generalizations to open cosmol. modes are discussed.

L10 ANSWER 76 OF 90 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1987:112122 CAPLUS
DOCUMENT NUMBER: 106:112122
TITLE: The dielectric spectrum of water in the microwave and near-millimeter wavelength region
AUTHOR(S): Kaatz, Udo
CORPORATE SOURCE: Drittes Phys. Inst., Univ. Goettingen, Goettingen, D-3400, Fed. Rep. Ger.
SOURCE: Chemical Physics Letters (1986), 132(3), 291-3
CODEN: CHPLBC; ISSN: 0009-2614
DOCUMENT TYPE: Journal
LANGUAGE: English

AB A combined anal. of complex permittivity data from the literature is presented for H₂O from 10 to 40°. Included are numerous microwave data measured by spot frequency methods and recent far-IR data determined by dispersive Fourier transform spectroscopy. The complex dielec. spectrum of water between 5 + 108 and 5 + 1011 Hz can be well described by a relaxation process with a discrete relaxation time.

L10 ANSWER 77 OF 90 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1986:488075 CAPLUS
DOCUMENT NUMBER: 105:88075
TITLE: Confining hot spots in 3C 196: implications for QSO-companion galaxies
AUTHOR(S): Brown, Robert L.; Broderick, J. J.; Mitchell, K. J.
CORPORATE SOURCE: Natl. Radio Astron. Obs., Charlottesville, VA, 22903, USA
SOURCE: Astrophysical Journal (1986), 306(1, Pt. 1), 107-9
CODEN: ASJOAB; ISSN: 0004-637X
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Very Long Baseline Interferometry observations of the compact hot spot in the northern radio lobe of the quasistellar object (QSO) 3C 196 reveal the angular size of its smallest substructure to be 0."065 + 0."045, or .apprx.300 parsec at the red shift distance. The morphol. of the hot spot and its orientation relative to the more diffuse radio emission suggest that it is formed by an oblique interaction between the nuclear QSO jet and circum-QSO cloud. The inferred d. in this cloud, together with its apparent size, imply that the cloud contains a galactic mass, >109 M.sun., of gas. The effect of the jet will be to hasten gravitational collapse of the cloud. If many QSOs such as 3C 196 are formed or found in gas-rich environments, the QSO radio phase may commonly stimulate the metamorphosis of circum-QSO gas to QSO-companion galaxies or it may play a significant part in catalyzing star formation in existing companions.

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ACCESSION NUMBER: 86117783 EMBASE
DOCUMENT NUMBER: 1986117783
TITLE: Microwave sterilization of hydrophilic contact lenses.
AUTHOR: Rohrer M.D.; Terry M.A.; Bulard R.A.; et al.
CORPORATE SOURCE: Department of Oral Pathology, College of Dentistry, OUHSC, Oklahoma City, OK 73190, United States

SOURCE: American Journal of Ophthalmology, (1986) Vol. 101, No. 1,
pp. 49-57. .
CODEN: AJOPAA
COUNTRY: United States
DOCUMENT TYPE: Journal
FILE SEGMENT: 004 Microbiology
012 Ophthalmology
027 Biophysics, Bioengineering and Medical
Instrumentation

LANGUAGE: English
ENTRY DATE: Entered STN: 10 Dec 1991
Last Updated on STN: 10 Dec 1991

AB We used standard 2,450-MHz microwave irradiation to achieve sterilization of hydrophilic contact lenses contaminated with a variety of bacterial, fungal, and viral corneal pathogens. A three-dimensional rotisserie was used to overcome the problem of 'cold spots' within the microwave oven. The contact lenses became dehydrated in approximately two minutes. Rehydration with normal saline restored their shape and appearance. The time necessary to prohibit all growth of the bacterial and fungal organisms studied ranged from 45 seconds to eight minutes. All viral contaminants were completely inactivated after four minutes of microwave exposure. Refractive properties were unaffected after 101 exposures to microwaves for ten minutes. Slit-lamp examination and scanning electron microscopy disclosed minute particles on the surface of these contact lenses but no damage to the lens matrix from irradiation.

L10 ANSWER 79 OF 90 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1985:531812 CAPLUS
DOCUMENT NUMBER: 103:131812
TITLE: Hot and cold spots in the microwave
background radiation
AUTHOR(S): Sazhin, M. V.
CORPORATE SOURCE: Sternberg Astron. Inst., Moscow, 117234, USSR
SOURCE: Monthly Notices of the Royal Astronomical Society
(1985), 216(1), 25P-28P
CODEN: MNRAA4; ISSN: 0035-8711

DOCUMENT TYPE: Journal
LANGUAGE: English

AB Temperature fluctuations of the microwave background result from a stochastic process which gives rise to outbursts appearing as hot and cold spots in the brightness distribution $\delta T/T$ over the sky. The statistical and astrophys. properties of such spots are considered, in particular the number of spots generated by d. perturbations with a Zeldovich spectrum. Such spots should be detectable by modern sky surveys with temperature sensitivities of ≤ 0.1 mK.

L10 ANSWER 80 OF 90 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1984:129438 CAPLUS
DOCUMENT NUMBER: 100:129438
TITLE: Interpretation of microwave active region structures
using SMM soft x-ray observations
AUTHOR(S): Strong, K. T.; Alissandrakis, C. E.; Kundu, M. R.
CORPORATE SOURCE: Space Astron. Group, Lockheed Missiles and Space Co.,
Palo Alto, CA, 94304, USA
SOURCE: Astrophysical Journal (1984), 277(2, Pt. 1), 865-73
CODEN: ASJOAB; ISSN: 0004-637X

DOCUMENT TYPE: Journal
LANGUAGE: English

AB Microwave ring structures associated with active region sunspots were discovered by C. E. Alissandrakis and M. R. Kundu (1982); however, there has been some uncertainty as to their origin. Combined soft x-ray and microwave data are given for 2 active regions, one of which had microwave ring structure. The regions were observed simultaneously by the x-ray Polychromator on the Solar Maximum Mission (SMM) satellite and the Westerbork Synthesis Radio Telescope at 6.16 cm while they were near to

disk center on 1980 May 25 and 26. The x-ray spectroheliograms were used to derive the electron temperature and d. of the coronal material of the ring structure. No significant variations were found across these regions, so they are not a result of systematic variations in electron temperature and d.

in

the coronal material above sunspots. Model computations are presented which show that the microwave emission at the center of the ring comes from a cooler region. In the course of this anal., a cool, compact soft x-ray feature was observed associated with 1 of the main spots. It also corresponded to a microwave and H α feature. It persisted for at least a day with a high d. (1011 cm⁻³) but a low temperature (1.5 + 106 K).

L10 ANSWER 81 OF 90 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on STN

ACCESSION NUMBER: 1983:195789 BIOSIS
DOCUMENT NUMBER: PREV198375045789; BA75:45789
TITLE: RE WARMING MICE FROM HYPO THERMIA BY EXPOSURE TO 2450
MEGAHERTZ MICROWAVE RADIATION.
AUTHOR(S): GORDON C J [Reprint author]
CORPORATE SOURCE: PHYSIOLOGY SECTION, BIOLOGICAL ENGINEERING BRANCH,
EXPERIMENTAL BIOLOGY DIVISION, HEALTH EFFECTS RESEARCH
LABORATORY, US ENVIRONMENTAL PROTECTION AGENCY, RESEARCH
TRIANGLE PARK, NORTH CAROLINA 27711, USA
SOURCE: Cryobiology, (1982) Vol. 19, No. 4, pp. 428-434.
CODEN: CRYBAS. ISSN: 0011-2240.

DOCUMENT TYPE: Article

FILE SEGMENT: BA

LANGUAGE: ENGLISH

AB Mice (20-40 g) cooled to colonic temperatures of 17-30° C were rewarmed to normothermia by exposure to whole-body 2450-MHz microwave radiation. Of 19 mice, 18 survived rewarming at rates of 0.04 to as high as 0.65° C/s. Hot spots from microwaves exposure, as indicated by deep tissue burns, were found at the base of the tail in 12 of 19 animals. The maximum rate of rewarming in these experiments (0.65° C/s) is much higher than warming rates achieved with external warming techniques such as immersion in warm water (.apprx. 0.03° C/s). When care is taken to avoid hot spots, whole-body microwave exposure at resonant wavelengths may be a potential means for rapidly rewarming experimental animals from hypothermia.

L10 ANSWER 82 OF 90 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1982:207984 CAPLUS
DOCUMENT NUMBER: 96:207984
TITLE: Polarized horseshoes around sunspots at 6-centimeter wavelength
AUTHOR(S): Lang, Kenneth R.; Willson, Robert F.
CORPORATE SOURCE: Dep. Phys., Tufts Univ., Medford, MA, 02155, USA
SOURCE: Astrophysical Journal (1982), 255(2, Pt. 2), 111-17
CODEN: ASJOAB; ISSN: 0004-637X

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Horseshoe-shaped structures associated with sunspot penumbras were detected in 6-cm synthesis maps of circular polarization taken with the Westerbork synthesis radio telescope. The high degree of circular polarization (pc = 95%) of the horseshoes requires gyroresonant emission. In fact, the horseshoe structures were predicted from the theory of the gyroresonance emission of individual sunspots. The absence of polarized emission above the sunspot umbras is also explained by gyroresonance theory. In sharp contrast to the polarized emission, the total intensity of the 6-cm radiation is enhanced above the sunspot umbras and exhibits a remarkable correlation with the longitudinal magnetic field of the underlying photosphere. Brightness temps. of TB \approx 106 K were found above sunspot umbras in coronal regions where the longitudinal

magnetic field strength $H_1 = 600-900$ G. Temporal instability precludes the detection of cool material above sunspot umbras in synthesis maps which are only sensitive to the much more stable and long-lived hot material.

L10 ANSWER 83 OF 90 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1982:152198 CAPLUS

DOCUMENT NUMBER: 96:152198

TITLE: Observations of ring structure in a sunspot associated source at 6 centimeter wavelength

AUTHOR(S): Alissandrakis, C. E.; Kundu, M. R.

CORPORATE SOURCE: Univ. Maryland, College Park, MD, 20742, USA

SOURCE: Astrophysical Journal (1982), 253(1, Pt. 2), L49-L52, 4 plates

CODEN: ASJOAB; ISSN: 0004-637X

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The detection is reported of a new kind of sunspot associated source in which the emission comes predominantly from a ring structure with size between that of the umbra and the penumbra. The absence of emission from the center of the spot is interpreted in terms of the orientation of the magnetic field and the presence of low temperature material above the umbra.

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ACCESSION NUMBER: 82102156 EMBASE

DOCUMENT NUMBER: 1982102156

TITLE: Thermoregulatory physiologic responses in the human body exposed to microwave radiation.

AUTHOR: Way W.I.; Kritikos H.; Schwan H.

CORPORATE SOURCE: Dept. Electric. Engin. Sci., Univ. Pennsylvania, Philadelphia, PA 19104, United States

SOURCE: Bioelectromagnetics, (1981) Vol. 2, No. 4, pp. 341-356.

CODEN: BIOEDI

COUNTRY: United States

DOCUMENT TYPE: Journal

FILE SEGMENT: 027 Biophysics, Bioengineering and Medical Instrumentation

002 Physiology

014 Radiology

LANGUAGE: English

ENTRY DATE: Entered STN: 9 Dec 1991

Last Updated on STN: 9 Dec 1991

AB By introduction of an additional compartment in the hypothalamic region Stolwijk's thermoregulatory model has been modified to consider partial heating due to hot spots induced by microwaves. It was found that because of thermoregulatory action, the temperature of the hypothalamus will not increase drastically until the rate of energy deposition exceeds the threshold level of about 50 mW/g. The primary controlling mechanisms are blood flow and sweating. For an energy deposition rate of 10 mW/g in the hypothalamus the increase in blood flow in the skin is negligible and the temperature rise of the hypothalamus as compared with blood temperature is about 0.5 °C. It was found that exposure of the head to electromagnetic radiation, in general, causes a decrease in temperature of the trunk and skin. The results show that while the deposition of energy in the hypothalamus at the rate of 10 mW/g produced significant conductive and convective effects, the same total energy uniformly distributed over the cranial cavity produces less significant effects.

L10 ANSWER 85 OF 90 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1980:595255 CAPLUS

DOCUMENT NUMBER: 93:195255

TITLE: Observation with the VLA of a stationary loop structure on the sun at 6 centimeter wavelength

AUTHOR(S): Kundu, M. R.; Velusamy, T.
CORPORATE SOURCE: Astron. Program, Univ. Maryland, College Park, MD,
20742, USA
SOURCE: Astrophysical Journal (1980), 240(1, Pt. 2), L63-L67,
plates L1-L3
CODEN: ASJOAB; ISSN: 0004-637X

DOCUMENT TYPE: Journal
LANGUAGE: English

AB A looplike structure connecting 2 sunspots of opposite polarity in an active region was observed at 6-cm with a resolution of 3''.5, using the Very Large Array. This loop structure is reminiscent of the x-ray loops, as observed, for example, from Skylab. The brightness temperature in the loop is .apprx.106 K and .apprx.5 + 106 K near its foot points. Most of the bright peaks in the loop are well aligned with a long neutral line. Several compact, highly circularly polarized emission peaks were observed over emerging flux regions near 1 of the spots. Some of these sources appear to be associated with arch filament systems. The low brightness emission in the loop is attributed to optically thin thermal bremsstrahlung. The emission at the foot points of the loop and that associated with the emerging flux regions are believed to be due to the gyroresonance process.

L10 ANSWER 86 OF 90 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1978:43603 CAPLUS
DOCUMENT NUMBER: 88:43603
TITLE: Some studies on isolated sunspot magnetic
configurations and associated hydrogen(H α)-
flares and microwave bursts

AUTHOR(S): Chattopadhyay, T.; Sarkar, S. K.; Das Gupta, M. K.
CORPORATE SOURCE: Inst. Radio Phys. Electron., Calcutta, India
SOURCE: Indian Journal of Radio & Space Physics (1977); 6(2),
144-7
CODEN: IJRSAK; ISSN: 0367-8393

DOCUMENT TYPE: Journal
LANGUAGE: English

AB Sunspots and sunspot groups (named as 'spots') and the spot-associated H α -flares and microwave bursts were examined for the period 1972-1974. From the analyses of completely isolated "spots" up to a certain magnetic field (200 G), the percentage association of H α -flares with "spots" exceeds that of the microwave bursts with "spots" while the reverse is true at field strengths >2500 G. And, 100 and 97% resp. of $\beta\gamma$ and "S" configurations of "spots" produce H α -flares while 89 and 87% of them produce microwave bursts, resp. Percentage distribution of spot-associated flares of faint, normal and bright intensity does not appreciably change with magnetic type of "spots", but in relation to the percentage distribution of spot-associated "impulsive", "grf" and other types of microwave bursts, it has been observed that impulsive bursts are comparatively more associated with the changing type of "spots". Examination of the positions of the confirmed H α -flares with respect to those of the "spots" shows that a few flares occur outside the visible area of the "spots".

L10 ANSWER 87 OF 90 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1976:114882 CAPLUS
DOCUMENT NUMBER: 84:114882
TITLE: Development of microwave discharge
spots in neon and helium gas by submicrosecond
pulses

AUTHOR(S): Kustom, Robert L.; Fuja, Raymond E.
CORPORATE SOURCE: Argonne Natl. Lab., Argonne, IL, USA
SOURCE: Journal of Applied Physics (1976), 47(2), 498-504
CODEN: JAPIAU; ISSN: 0021-8979

DOCUMENT TYPE: Journal
LANGUAGE: English

AB Microwave discharges were developed in pure Ne, pure He, and 90%-10% Ne-He

gas around the trajectory of high-energy charged particles by applying submicrosec pulses shortly after the passage of the particle. The pulse width and amplitude of the discharge field were varied so that the effect on the discharge spot development could be observed. All measurements were made at room temperature and atmospheric pressure. The discharge chamber is a partially dielec.-loaded waveguide operating in the transverse electromagnetic mode at 1300 MHz so that the discharge-fields are uniform over the gas volume

L10 ANSWER 88 OF 90 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1974:89384 CAPLUS
DOCUMENT NUMBER: 80:89384
TITLE: Coronal prominences on the disk observed on 29 October 1972
AUTHOR(S): Kawaguchi, Ichiro; Kitai, Reizaburo
CORPORATE SOURCE: Fac. Sci., Univ. Kyoto, Kyoto, Japan
SOURCE: Solar Physics (1973), 33(1), 145-52
CODEN: SLPHAX; ISSN: 0038-0938
DOCUMENT TYPE: Journal
LANGUAGE: English

AB A group of coronal prominences appeared over a large sunspot group near the central meridian on October 29, 1972. The bright points, which were most clearly seen on the H α -image taken at the line center, are interpreted as the points of inflow of the prominence matter into the penumbra. The amount of mass transported by the largest prominence among the group shares a considerable fraction of the total mass which may be contained in the permanent coronal condensation over the spot group. The observational data for the microwave emission from the spot group is discussed in relation to this phenomenon.

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ACCESSION NUMBER: 74052685 EMBASE
DOCUMENT NUMBER: 1974052685
TITLE: Microwave radiation hazards around large microwave antenna.
AUTHOR: Klascius A.
CORPORATE SOURCE: Jet Propuls. Lab., California Inst. Technol., Pasadena, Calif. 91103, United States
SOURCE: American Industrial Hygiene Association Journal, (1973) Vol. 34, No. 3, pp. 97-101.
CODEN: AIHAAP
DOCUMENT TYPE: Journal
FILE SEGMENT: 035 Occupational Health and Industrial Medicine
014 Radiology
LANGUAGE: English

AB The microwave radiation hazards associated with the use of large antennas become increasingly more dangerous to personnel as the transmitters go to ever higher powers. The near field area is of the greatest concern. It has spill over from sub reflector and reflections from nearby objects. Centimeter waves meeting in phase will reinforce each other and create hot spots of microwave energy. This has been measured in front of and around several 26 meter antennas. Hot spots have been found and are going to be the determining factor in delineating safe areas for personnel to work. Better techniques and instruments to measure these fields are needed for the evaluation of hazard areas.

L10 ANSWER 90 OF 90 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1967:60413 CAPLUS
DOCUMENT NUMBER: 66:60413
TITLE: A radio source associated with a rapidly developing group of sunspots
AUTHOR(S): Borovik, V. N.; Korzhavin, A. N.; Peterov, N. G.
SOURCE: Solnechnye Dannye (1965), (10), 67-71
From: Ref. Zh., Astron. 1966, Abstr. No. 7.51.314
CODEN: SODAA7; ISSN: 0552-5829

DOCUMENT TYPE: Journal
LANGUAGE: Russian

AB In March, 1965, the group of sunspots Number 25 (numbering from the Bulletin "Solnechnye Dannye), in a state of disintegration, suddenly and unexpectedly increased by 6 times in area from March 18 to 19. On the 19th of March, the ratio emission flux from the source associated with this group and observed with the large Pulkov radiotelescope simultaneously at wavelengths of 3.2 and 4.5 cm. (resolution power 1',1 and 1',3, resp.) increased by approx. the same magnitude. The size of the source, which remained constant throughout the observation period, was 1',5 at 3.2 and 2'3 at 4.5 cm. On March 19, the brightness temperature of the source, calculated under

the assumption of its circular symmetry, was 120,000°K. at 3.2 and 170,000°K. at 4.5 cm. The kinetic temperature, calculated from these data, was 200,000°K. The optical thickness of the emitting region, on March 19, was 0.9 at 3.2 and 1.8 at 4.5 cm. The emission measure was: $\int n^2 ds = 0.5 + 1029$. The kinetic temperature was 4 times greater, and the emission measure 8 times greater, on March 19, than on March 18. The effective emission center of the source before and after March 19, was over the photosphere at a distance of (0.04 ± 0.01) R.sun. at 3.2 and (0.05 ± 0.01) R.sun. at 4.5 cm. No strict correlation was found between the changes in the area in the optical group of spots and the radiation flux from the corresponding radio source; this was in accordance with previously obtained data for the same wavelengths.

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